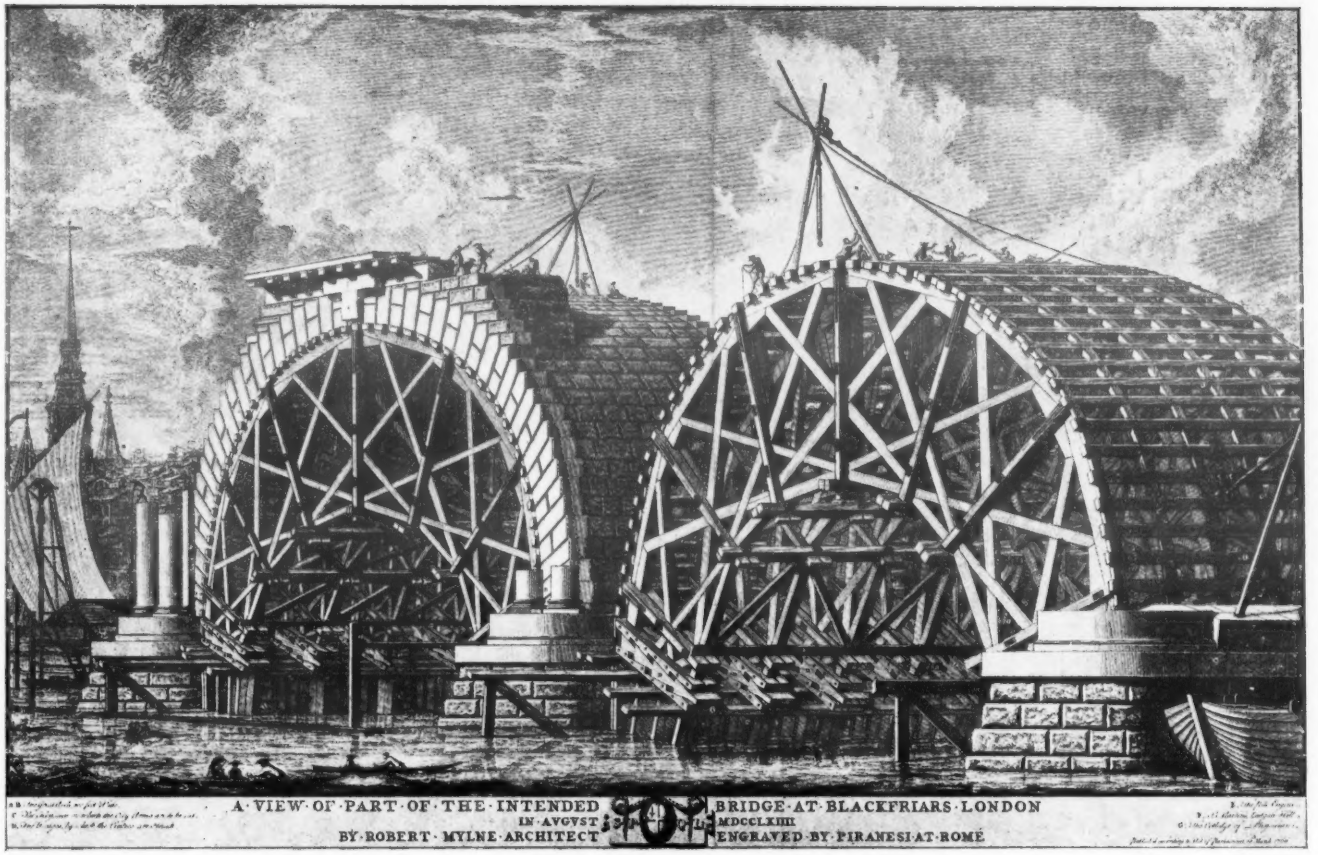
Journal of the Royal Institute of British Architects

THIRD SERIES

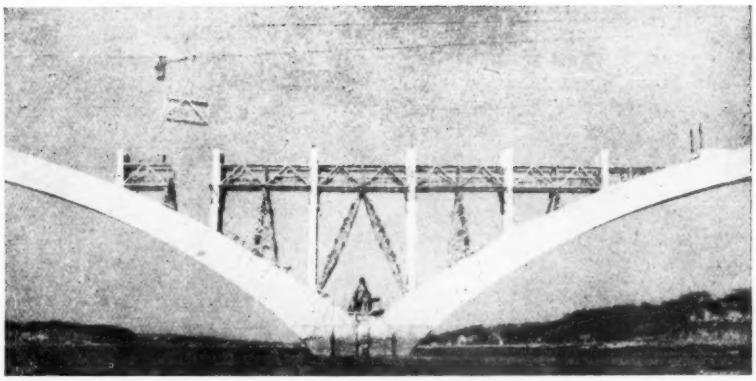
VOL. XXXVIII. No. 14 — 16 MAY 1931

Contents for 16 May 1931



THE CONSTRUCTION OF BLACKFRIARS BRIDGE
From an Engraving by Piranesi in the Library of the Royal Institute of British Architects

VOL. XXXVIII. No. 14 16 MAY 1931



BRIDGE OVER THE ELORN RIVER, PLOUGASTEL, BRITTANY, DURING CONSTRUCTION
Designed by M. Freyssinet. Built by Messrs. Considère

Modern Bridges

BY O. MAXWELL AYRTON, F.R.I.B.A.

[*A Paper read before the Royal Institute of British Architects, Monday, 27 April* 1931]

THE PRESIDENT, SIR BANISTER FLETCHER, F.S.A., IN THE CHAIR

IN considering the development of modern bridge building and design it is helpful to look back and so remind ourselves of the tradition handed down to us, and I propose to start with one or two slides of early examples.

The middle of the eighteenth century showed great activity in road and bridge building, and from then up to the beginning of the nineteenth century gave us the climax in pure masonry bridges. In considering bridges of all periods the same problems that exist to-day, existed then, those of bridging a river or space with as little interruption as possible to the road or to the way beneath it. These beautiful hump-backed bridges throughout the country, are as they are, not for beauty's sake but because of the rise necessary to the span, and similarly the low, flat bridges of many spans and piers were again of necessity and not dictated by taste.

It has always been the endeavour of bridge builders to overcome these difficulties, and it is due to their consistent efforts that we now have steel and reinforced concrete construction to work with.

One of the most interesting early instances of masonry arch construction is that at Pont-y-Prydd, over the river Taff, by Edwards, built in 1746. It has a wonderful history illustrating the fine spirit of adventure in design, the determination of a man to break away and carry out something new in idea, with courage.

Edwards was a farm hand, and as a boy became intensely interested in watching some stone building that was being done on the farm. He started trying himself on walling and finally worked up a small local business. In 1746, at the age of 27, he undertook to build this bridge in three spans, and to maintain it for seven years.

A year after its completion a great flood came, bringing with it debris of all sorts which, held up by the piers and abutments, caused a pressure of water which swept the bridge away. Recognising the danger he started again, but this time decided to eliminate it by building a single span arch of 140 feet—the like of which had never been attempted before in England. It was not a matter of scientific calculation in those days, but of intuition, trial and error.

Just as the parapets were being completed the great weight at the haunches of the arch forced up the crown, and once again it was a ruin. With amazing courage he started for a third time, and this time successfully. He reasoned out for himself the cause of the trouble and reduced the weight by constructing the haunches with circular holes through the spandrils. I only propose to show you one more which may be taken as the finest example of pure masonry construction that we have.

The Grosvenor Bridge over the River Dee at Chester was designed about 1805 by Mr. Harrison, architect of Chester, who was also responsible for the Chester Castle buildings. It was not until some twenty years later, however, that it was built, and by that time Mr. Harrison was too old to undertake so vast a work. Mr. Hartley, of Liverpool, surveyor, was commissioned and he undertook to carry it out upon condition that the design was in no way altered.

For many years it was the largest span bridge in the world, 200 feet in one clear span, and rising 40 feet. It was built of granite, limestone and sandstone in lime mortar. It is interesting also to know that the contractor, Mr. Trubshaw, designed an entirely new form of centering for this great arch, which caused considerable excitement at the time, and later he presented a model of it to the Institute of Civil Engineers. It was opened in 1831 and remains to-day a monument of far-sighted efficiency, one might even say 100 per cent. efficiency. There is no doubt that it could have been built cheaper, say, 10 per cent. to 15 per cent., without affecting in any way the return on the money expended. It was a private company's venture and the toll returns were some £3,000 per year, which would not have been less had the bridge been cut down to bare utilitarian cost. It is an instance of money spent wisely upon æsthetic grounds, for no one dare challenge the rightness of this magnificent entrance to Chester, enjoyed for the last 100 years. Hundred per cent. efficiency cannot be achieved where the proper proportion of æsthetic regard is missing.

At the beginning of the nineteenth century cast iron for bridge building became possible, and Telford immediately seized upon it and designed the first in this material at Iron Bridge in 1779. In 1822 he was engaged upon the Menai Straits Suspension Bridge, again one of the first of its type, the history of its building reads as an epic to the man. Rennie, having completed Waterloo Bridge, on being commissioned to design Southwark Bridge, where greater spans were called for, did not look back, but frankly adopted this later form of construction, and produced an example which may be regarded as a high development of cast iron bridge building. Telford also made a wonderful scheme for the new London Bridge, in one span of 600 feet, about 1802. All showing that spirit of adventure and enterprise.

It is from this point that the history of bridge design changes to the era of engineering with a contribution from architecture, with this misfortune, that the architectural profession instead of guiding public taste was guided by it and looked back rather than at the present, and made it their chief endeavour to reproduce under impossible conditions the beautiful work of their predecessors.

One cannot but feel that it was that lack of appreciation of new materials and forms of construction shown by architects that started the alienation of the two professions.

There must be the genuine desire to make proper use of movement in design. Movement in any direction is the birth of good design, and it is the architect's undoubted province to assist the engineer by utilising to the utmost of his power all movements in new construction and material.

Disagreeable as it is, we have to admit that, generally speaking, for the last eighty years we as a profession have consistently looked back for inspiration and only looked at the present and future to see how it might best be avoided or hidden.

Westminster Bridge is an instance of this. Built in 1856, Sir Charles Barry was responsible for its "architectural adornment," I quote the terms of his commission. Exeter bridge is another example.

Block lent by "The Builder."

SINGLE SPAN BRIDGE OVER THE RIVER TAFF AT PONT-Y-PRYDD.
Designed by Edwards in 1741

THE GROSVENOR BRIDGE, CHESTER (1805)
Designed by Harrison
Harrison was also Architect of Chester Castle, which is seen through the bridge

Steel construction, the next step, brings us straight up to modern bridge design. Here, happily, the material itself was little interfered with. Pont Alexandre III in Paris is steel and is a beatiful bridge, in spite of the architectural features with which it is covered.

But another form of architectural treatment was born, that of clothing the steel-framed construction with stone to imitate true masonry.

Again we have an example in the Tower Bridge, completed 1894. I will not fret you with more—there are, unfortunately, many.

The Forth Bridge is a definite landmark in the design of steel frame construction in more ways than one, for it was this great effort which first aroused the admiration of the general public. One is grateful that the grandeur of its stupendous proportions have been left alone and unadorned. Such examples as the great bridge now under construction at Sydney, designed by Dr. J. J. Bradfield, Chief Engineer, N.S.W., and Mr. Ralph Freeman, Consulting Engineer for Messrs. Dorman, Long and Co., with Sir John Bennett and Partners consulting architects, and many others, such as Quebec, the Suspension Bridges at Cologne and Philadelphia, all show a beauty and refinement of detail that was not possible when the Forth Bridge was constructed.

There is no doubt that this form of design is now definitely appreciated by the public. *The Times* only recently published a large photograph of a great steel-framed station roof as a thing of beauty!

I do not believe that were the Tower Bridge to be built now that stone towers would be called for. Extreme simplicity of treatment is called for in both steel and concrete, nothing is gained by elaboration.

Following steel came reinforced concrete, and it is of these two forms that all modern bridges are now constructed. The time has come when practically no other methods are available. The immense carrying power of bridges called for by modern forms of transport eliminate the use of masonry and brickwork, save in circumstances so exceptional that they may be disregarded. I am not going to attempt any comparison between the two forms of construction for the simple reason that in every instance the problem must be thought out when either one or the other will prove to be the right solution for that particular bridge. At no time in the history of bridge building has there been so much activity, and thanks very largely to the late Minister of Transport, Col. Wilfrid Ashley, the architectural profession has been given a say in the matter, and it is up to the profession to see that this is used rightly, that is, in such a way as can leave no doubt of their essential assistance to the designers of the bridges—the engineers.

It would be difficult to find a finer example of modern bridge building in reinforced concrete than the great bridge over the Elorn River, Finisterre, near Plougastel, in Brittany, and I am indebted to Mr. Steinberg, of Messrs. Considère, for the pictures and details of its construction. The designer of the bridge was M. Freyssinet.

The Elorn is at this point about 2,000 feet wide with banks rising fairly steeply to some 120 feet above the water level. There is a very considerable rise and fall of the tide, which added to the difficulties to be surmounted.

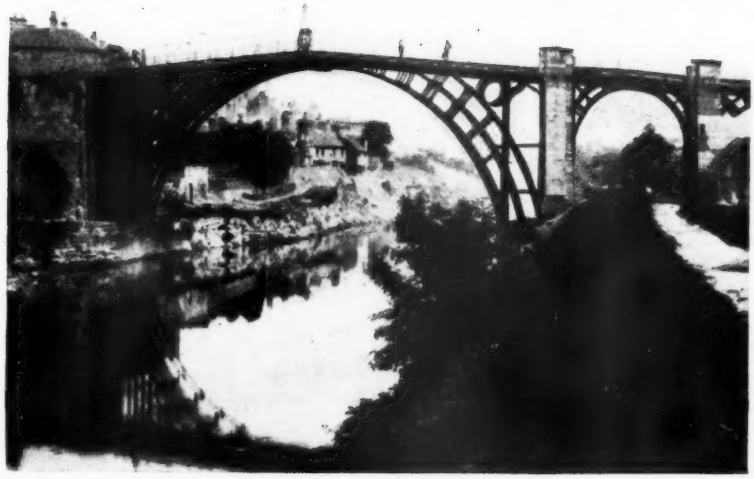
While the approach viaducts were being erected the river piers were built and continued above the water level and the springings of the arches were also built so that they cantilevered out several feet from the centre line of the piers. These projecting pieces of the arches were subsequently used to act as supports to the centering.

It was decided to build lattice arched centering in timber which could be used successively for the three spans. To enable this to be done, two pontoons each weighing about 1,000 tons in reinforced concrete were built, launched and floated into position on the foreshore. Between them a number of timber towers were constructed forming the ordinates of the parabolic curve of the centering—the centre towers being over 100 feet high.

The lower ends of the arched centering for a length of about 25 feet were built in reinforced concrete, but the remainder was constructed entirely in small section timber nailed together.

To enable the temporary supporting towers to be demolished, the ends of the arched centering were tied together by eighty wire ropes $\frac{3}{4}$ inches in diameter and provision made at each end for tightening or slacking these ropes hydraulically.

When the construction was finished and the temporary towers demolished, the water was pumped from the pontoons and they were floated



TELFORD'S BRIDGE AT IRON BRIDGE
The first cast iron bridge (1779)

THE MENAI STRAITS SUSPENSION BRIDGE (1822)
Telford

Block lent by "The Builder"

BRIDGE OVER THE ELORN RIVER, FINISTERRE, NEAR PLOUGASTEL, BRITTANY
Designed by M. Freyssinet

out at the next tide, thus enabling the entire centering of a span of 580 feet and a height of 100 feet to be floated out to its position between the piers of the first arch.

This operation took only four hours, and the centering weighing 540 tons was then jacked up and slung to the projecting portions of the piers. To those who know the Menai Straits Suspension Bridge it is interesting to realise that this gigantic piece of timber centering would have been several feet too long and too high to have been floated under it !

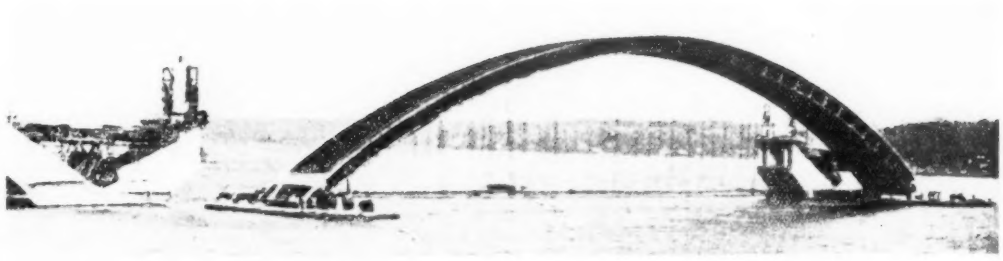
The centering as it now stood was not strong enough to take the weight of concrete to be placed upon it and provision was therefore made for converting it from a bowstring girder to a braced arch. This was done by taking the thrust through concrete blocks direct on to two projecting shelves, left on the under side of the arches already constructed.

This enabled the pontoons to be removed and also permitted the tension cables to be slackened, the centering thus becoming a braced arch and capable of supporting the weight of the wet concrete.

When the concreting of the first arch was finished the cross cables to the centering were tightened up again and the concrete thrust blocks cut away and the centering gently lowered on to the pontoons which had again been floated into position. The entire structure was then floated out and into position again for the next arch, and again for the third. The centering for the last arch was taken down in short sections.

It is difficult to imagine a more romantic piece of work—throughout it would appear that each step taken was upon new ground, and shows rare courage and conviction on the part of M. Freyssinet.

Another exceedingly interesting example is King George V Bridge, Glasgow, designed by Messrs. Considère. Its particular interest lies in the fact of its great strength. The designers, in addition to being tied down to



BRIDGE OVER THE ELORN RIVER, FINISTERRE, NEAR PLOUGASTEL, BRITTANY
Floating the timber centering into position
Designed by M. Freyssinet

the spans' (of 146 feet clear) height above water level, and to the level and gradient of the roadway, which has a width between parapets of 80 feet, were also called upon to give a stupendous carrying load far exceeding anything in the country, namely 120 tons + 25 per cent. impact upon four wheels!

It is indeed a matter of regret that such a piece of engineering ability should be covered up by a sham skin of granite in an arch form which could not possibly stand up even by itself. This granite skin and arch stones are about eight inches thick, and it required great ingenuity to hang them up to the concrete in such a way that they should move with it and not fall to ruin.

Queen Margaret Bridge, also in Glasgow, suffers in the same respect, though in this case the rise of the arch is sufficient to meet the demands of masonry.

Another modern bridge which might have been singularly fine in its surroundings, the new Tournelle Bridge in Paris, has been similarly clothed.

There is one interesting feature in this bridge, however, in the figure of a saint in almost obelisk form, rising from the parapet about a third of the way across on the East side. In these bridges we have again examples of looking back. The faked masonry clothing hung up to the reinforced concrete. Can one imagine Telford or Rennie considering such a thing for a moment, the covering up of everything that makes such a bridge a landmark in design, with a pretence to a form of construction that has been dead for a century?

Engineers are to blame for this to a certain extent, for they introduced reinforced concrete with no pride in it as a material, but with acclamation for its extreme economy and cheapness, with the result that it has been accepted only as a means to an end, to be hastily hidden.

Any suggestion of work upon it, to treat it as one would a good stone or brick has been sedulously turned down as extravagant. Led by work on the Continent and in America the view is rapidly changing—but why so late—due solely to the lack of appreciation on our part of a new field and movement to work upon.

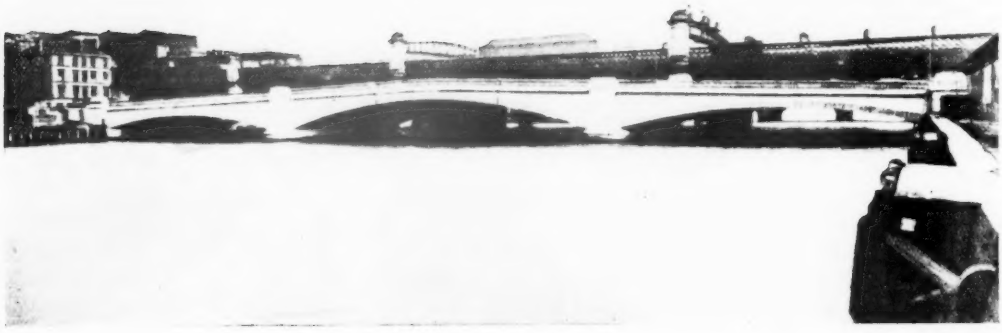
Of the treatment of concrete, first and foremost, it should never under any circumstances be cemented over—many bridges are condemned as concrete which have been treated in this way—had they been stone and so cemented they would have been just as ugly.

The unpleasant skin of cement left on the surface when the shuttering is removed is no value and should be removed. There are various processes. In work such as blocks or precast work, the face may be wire brushed and the unbroken face of the aggregate exposed. There are chemical preparations which may be used to prevent the external skin of cement from setting until such time as the shuttering is struck and the surface then wire brushed.

Again the surface may be left until fully set and hard, and then bush hammered, tooled or carved.

A strong mix of concrete, say 3: $1\frac{1}{2}$: 1: with a fine aggregate of say $\frac{3}{4}$ down may be carved in as much detail and delicacy as a coarse granite.

Colour mixtures in concrete have not so far been very satisfactory, but the use of different



KING GEORGE V BRIDGE, GLASGOW
Designed by Messrs. Considère

KING GEORGE V BRIDGE, GLASGOW

Detail showing the granite voussoirs being hung to concrete structure

coloured aggregates are most interesting, and the cost of the aggregate is so small an item on the whole that it need not be seriously considered.

One thing that has been definitely learned is the necessity for first rate workmanship and material in the timber forms or shuttering. Heavy timber must be used and ample strutting—boarding should be not less than 2 inches, and should be grooved and tongued.

Ply board as a surface lining may be used where large even surfaces are desired.

Care must also be taken that the " lifts " from day to day's work are considered in the design very much as coursing has to be considered in masonry.

A day's work may be a 2 ft. lift, with the result that every 2 feet there will appear a distinct change in the appearance of the concrete. This probably is due to the cement settling down at the bottom of each lift while in a liquid state.

A slight groove or rustication will overcome this, or two or three courses of roof tiles laid in the concrete have a good effect.

The following slides are some bridges designed by Sir Owen Williams in which I have collaborated with him as consulting architect.

The bridge over the Findhorn at Tomartin is an interesting form of beam construction in which the parapet walls are carried up to the necessary

depth of the beam, the cloister-like openings being determined by the alignment of the steel reinforcement. Upon the inner face of one side is a long inscription and two heraldic panels which were carved direct in the concrete at the completion of the work, the detail of this carving is similar to that which would be obtained in carving a coarse granite.

The spans are 98 feet.

The bridge over the Spey at Newtonmore is curious for its steep gradient from one side to the other, rising about 1 in 25.

The spans are 100 feet and 62 feet.

The expansion joints in this bridge form an important feature in the design. The cut waters and spandrils rise up in a parabolic curve from the water level, giving a feeling of great stability in the fastest running river in Great Britain. The little bridge at Dalnamein has its abutment walls and parapet built of precast blocks cast on the site and wire brushed.

Crubenmore and Aultlarie are two examples of very small bridges on the Inverness Road designed in flat triangular surfaces, which are effective in the way they catch the light and they seem to fit happily into their surroundings.

Wansford Bridge, on the Great North Road, is one of the very few if not the only example of a mass concrete bridge, that is, without any reinforcement. With a centre span of 105 feet, it is, I think, one of the finest examples of concrete finish in the country. It is bush hammered throughout and the two illustrations of the lettering before and after this treatment show very well the effect. The colour is a warm creamy brown. Great width and extreme flatness are the characteristics of modern bridges and in consequence the parapets which formed so large a part of the æsthetic beauty of the early bridges, particularly when they rose to a steep gradient, no longer count to the same extent.

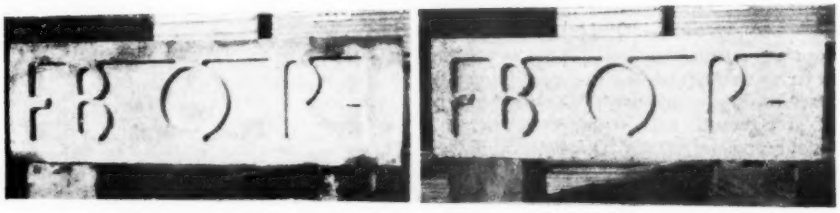
In many instances there is nothing to call one's attention to the fact that one is approaching or even crossing a bridge. I feel that this definitely justifies in certain cases some form of superstructure, as in the case of the Lea Valley Viaduct and bridge over the Lea Navigation River.

I am well aware that this can be defended solely upon æsthetic grounds, but to arrive at 100 per cent. efficiency there must be a proportion of thought and expenditure allowed for, which must not be regarded as unnecessary expense.

There is no doubt that the future of concrete as a monumental material is full of possibilities, but these can only be discovered by the frank acceptance of the material with all its difficulties and disappointments, using it as engineers would have us use it, but adding to it that spirit which is lacking from any design produced solely upon scientific principles. Some maintain that, provided a building is designed on perfect principles of science, it cannot be improved or aided by æsthetic considerations.

That is entirely fallacious. It is definitely our work to provide that indefinable spirit and glamour which can only be accomplished by honestly endeavouring to use to its utmost everything that modern science gives.

Let us be stimulated by the past in this respect and return to the tradition of the great bridge designers, that of seeking inspiration in the present rather than the past.



DETAIL OF LETTERING SHOWING THE EFFECT OF BUSH HAMMERING

Vote of Thanks

The PRESIDENT then called on Mr. Percy Harris, M.P., to propose a vote of thanks to Mr. Ayrton.

Mr. PERCY HARRIS, M.P.: Mr. President, ladies and gentlemen,—When I was invited to come to this great lecture hall, to this famous Institute, the Royal Institute of British Architects, and listen to a lecture, I came to learn, and I certainly did not expect to speak; in fact, your President did not let me know that I was to move this resolution of thanks until the lights were turned down, so that I had not even the opportunity of making notes. Certainly, from my point of view, I have listened to a most inspiring lecture.

My only qualification to move this vote of thanks is that for a quarter of a century I have been associated with the government of the greatest Local Authority in the world, the town in which we live. And in that capacity I have always felt the importance of instructing myself and keeping myself in contact with your profession. We are in constant contact with it in many capacities, in my case especially in the constructing of new dwellings for the new generation which is to live in London on various housing estates, and, of course, also with our bridges. And nowhere in the world are there greater opportunities for bridges, because, as you know, London is grossly under-bridged. And one of our great difficulties is we cannot make up our minds what kind and character of bridges we want, where they are to be placed, and how they are to be constructed; if they are going to be designed according to tradition, or on new lines, steel bridges, or concrete bridges, and, if the latter, whether they are going to be hidden by other materials. I am glad to see here my old friend, Sir George Humphreys; he can bear out the constant worry it is to those responsible for the government of London to solve these two problems. We can only solve them by the co-operation and the goodwill of our architects and engineers and town-planners, all working together in co-operation and unison. But we also need to be educated ourselves. I suppose, Mr. President—and I specially suggest it to your successor, a famous town-planner—that the more often you invite London Local Government representatives to your lectures, to train them in the new art of architecture and bridge construction, the better for your profession, and the better for the beauty and future of our great town. I have found in the lecture, Sir, great inspiration. Much of what the lecturer has told us to-night was familiar to your members and no doubt most of the pictures and the technical details were known to them; but to me, as a mere layman, I do not think he could have made his lecture more inspiring or more enjoyable; it was so clear, and his photographs were so well illustrative of his argument, that it imparted poetry to the designs he showed. My feeling is—speaking as one who is very interested in architecture—that we ought to respect the old and when we have got a good thing we should keep it, even at a sacrifice of our convenience. When, however, we have to deal with the new, I agree we should look to the future and use everything which science and mechanics have given to us. I think your lecturer, Sir, in his most inspiring talk to us, has shown largely how the old can be linked up with the new.

I have very great pleasure in moving a vote of thanks for his most interesting and instructive lecture.

Sir GEORGE HUMPHREYS (President of the Institution of Civil Engineers): Mr. President, ladies and gentlemen—I should like, first of all, to thank you, sir, for having given me the opportunity of being present this evening and of listening to what Mr. Harris has well described as a most inspiriting address. I have been asked if I would second a vote of thanks to the lecturer. I am sure that the easiest part of my task is to ask you to render to him our best thanks for all that he has said.

I interpret his paper as an appeal for æsthetics in bridge building, and I am sure we are all in accord with that. When we think of the many beautiful examples there are of bridges in this and, I was going to say more especially, in foreign countries, and when we also think, I am sorry to say, of some of the examples of the opposite nature, then the appeal for æsthetic treatment comes to us with double force. But the question really, in the case of a large structure, an important structure, is, How can this result best be accomplished? The solution to that question is not at all an easy one. The paper well brings out that advances in the knowledge of the properties and the use of materials, as also the discovery of new ones, have made physically possible the construction of spans and designs of which I do not think our predecessors, in their wildest dreams, ever imagined. The requirements of to-day, I think, impose more onerous conditions even than those to which Mr. Ayrton refers when he says, in his paper, "In considering bridges of all periods the same problems that exist to-day existed then, those of bridging a river or space with as little interruption as possible to the road or to the way beneath it." The permissible interruption of the past, dictated by, or in fact a function of, the building resources then available, may not apply to the requirements of to-day in population centres, and moreover may be, indeed, unnecessary, owing to improved technique. Is not every bridge designer

Steel Bridge at Cologne

familiar with the almost daily question : " What is the least possible depth of construction that you can get over such and such a chasm with ? " I have said that the solution of the problem how best æsthetic results can be secured is not easy. Reflection will show that this is so. Bridge designing, with the greater choice of material now available, is rapidly becoming a science, if not already far upon that road. The problems embraced in the design, composition and strength of the component parts, are problems that—you will pardon my saying it in this room—it takes an engineer alone to appreciate ; and for important bridge work it even requires a specialist engineer. Upon a due appreciation and understanding of the forces and their reactions, the very outline of the structure must depend. Material considerations of this nature, however, require to be wedded to æsthetic ones, and it is here that a difficulty arises. A genius in construction is not necessarily a genius in the matter of taste. Given a possessor of both, however, the ideal is attained. But the theory of bridge building, the knowledge of materials and the methods of testing them, are in a fair way of becoming standardised. I am sure we do not wish to think that the æsthetic side is to be standardised. The true artist, I think, does not know any standards.

How can two such apparently irreconcilable requirements best be fulfilled ? I confess I know of no general solution. I think, however, every support ought to be given to those schools of design where men are taught the principles of bridge construction ; that they ought to be taught, first, the principles of æsthetics. This is a side of the question which is being very much developed on the Continent at the present time.

As I have said, I know of no general solution, but I think you will agree with me that, from what we have seen this evening at any rate, in the pictures which have been displayed, especially the later ones, there has been a very nice partnership established between the engineer and a member of this Institute. If we proceed on lines like that, I think that in the future we shall have cause for congratulating ourselves on the structures which will be put up.

Colonel BRESSEY, C.B. (Chief Engineer to the Ministry of Transport) : Mr. President, ladies and gentlemen,—Mr. Maxwell Ayrton, who has given us such a very interesting address to-night, has been fortunate in the opportunity of collaborating with one of the most skilful and inspired engineers of the day, namely, our friend who is sitting opposite, and who will, I hope, have the opportunity of speaking. He ought to have preceded myself. The lecturer has shown us some interesting photographs of Plougastel, in Britanny, where the spans of the reinforced concrete arch have been increased to something over 600 feet, whereas in England the largest span, so far, that at Berwick-on-Tweed, is 360 feet. Those who have observed that arch of 360 feet at close quarters will realise that a span of 600 feet is quite startling. But,

more startling still, M. Freyssinet, who constructed the bridge at Plougastel, maintains, on the high authority of the man who has done the job, that he can double that span and get a span of 1,200 feet without difficulty. That will lead to extraordinary demands on architects, who may be called in to clothe the design, or to collaborate with the engineers in carrying it into execution. When you reach spans of 1,200 feet or more, the standards set by the ancient Greeks and Romans will be rather difficult to apply. The French, who perhaps possess more logical minds than we do, are immensely impressed with this bridge at Plougastel, which is described in a special number of the *Moniteur des Travaux Publics*, appearing last February. I hope you will add it to your library, as it is one of the finest illustrated works on bridges I have ever seen. A French architect, commenting on this design, which is quite stark in its character, makes these remarks, as a warning to architects who have to deal with such bridges: "The desire to be sumptuous or to introduce inappropriate historical recollections merely renders such work insipid, by overlaying or disguising its intrinsic qualities." That is rather a fine phrase, I think. Very few architects will, however, be called in to design architectural trappings for a bridge with a 1,200 foot span. On the other hand, the Ministry of Transport are giving help for re-building 600 bridges every year, of comparatively modest span, over canals, railways and other obstacles, thus affording enormous scope for the architectural profession. I was much impressed by what Mr. Ayrton said about parapets. That is the only part of a bridge which 99 people out of 100 see; and much care should accordingly be devoted to the design of the parapets, especially the choice of the materials used for them, so as to cause a pleasing impression on those who see the bridge from the inside. Often too much trouble is bestowed on the outside of the bridge which no one will ever see. When visiting a new road in Wales I was asked to inspect a concrete bridge there. Ladders were produced for me, and I climbed down to a low-lying swamp, where no other human being will ever go. I saw that the whole face of the bridge was covered with what was considered appropriate classical ornamentation, architraves, cornices, and so on; and I am the first, as also I am probably the last person to see it. I regret to think of the expense which was incurred for my personal delectation. I hope that when any of you are in that neighbourhood you will ask for the ladders and will make the descent I did, into the swamp, taking, of course, all the necessary precautions, to admire that hidden elevation.

As to these classical decorations, I think sometimes that there is a slight analogy between medicine and architecture. There are many of our countrymen who believe that the appropriate treatment for every disease consists of a standard sized bottle, with the traditional ribbed projections down the back, and a label in front, prescribing the times at which the medicine is to be taken and the extent to which the bottle is previously to be shaken. Variation is only tolerated in regard to the colour of the material inside the bottle; but every bottle must be of the same size and have the same ribbed marks down the back. So, too, with numerous builders the forces of tradition die hard, and there are many who believe that the appropriate treatment for every structure consists in the application of ornaments which we have inherited from our forefathers, and which now possess that mystic sacramental dignity which the medicine bottle represents among our medical friends. And there is the further analogy that doctors themselves are ashamed of the medicine bottle; it is the clients, the patients, who insist on having the medicine bottle with the label in front and the ribs down the back. Architects, in the same way, would be glad to be rid of the sacramental trappings, but in many cases, unfortunately, the clients will not permit it. I am very anxious to hear Sir Owen Williams speak. He has been associated with Mr. Ayrton on several bridges, and will be able to present a different aspect of the matter to that which has been so eloquently put before us by Mr. Maxwell Ayrton.

Mr. J. S. WILSON: I wish to mention one point. Mr. Maxwell Ayrton showed us a slide of the enormous suspension bridge at present being built in America with a span of 3,500 ft., and he commented on the appearance of the towers.

Those towers are to be 680 ft. high and the illustration represented them as being of masonry or concrete. The masonry or concrete could only be a casing, for the enormous load is to be carried by steel framework which would be hidden.

To make such towers appear as of solid masonry would be a deception because it would in reality be only a covering as in the Tower Bridge, but the point of interest here is that in this instance it would perpetrate a double sham, for if actually built of solid masonry the towers could barely carry their own weight and would be quite incapable of carrying the enormous load imposed by the suspension ropes.

Sir OWEN WILLIAMS: I thank you for giving me this opportunity of being present to join in the discussion on Mr. Ayrton's paper. I have been associated with him in various projects for eight years, and I think that the sum total of that collaboration is, in the end, that we are still friends; it is not without our having had some difficulties, but we are still friends. And, in that spirit, I may be allowed to express a few views on the paper which he has

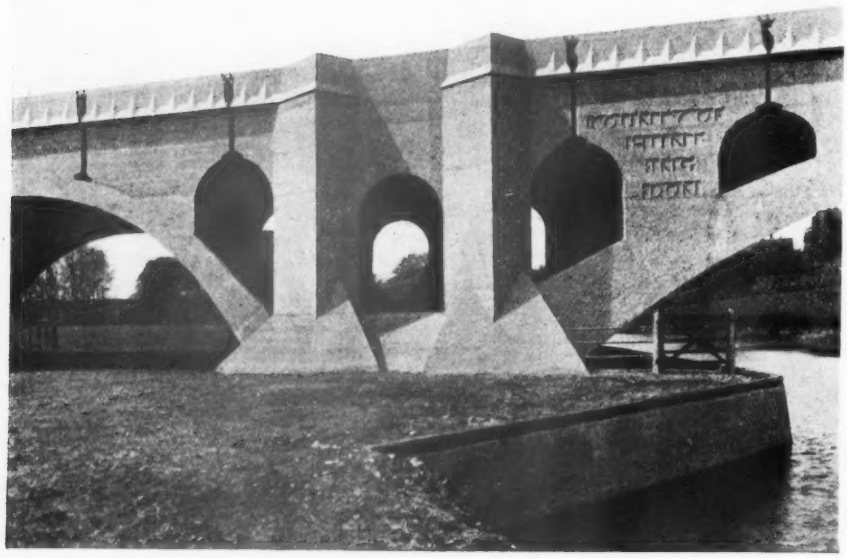
THE CRUBENMORE BRIDGE ON THE INVERNESS ROAD
Mr. Maxwell Ayrton, Consulting Architect, and Sir Owen Williams, Engineer

given you. The last speaker has mentioned the question of the stone towers on the Hudson Suspension Bridge. It does rather reply to what Mr. Ayrton says, " I do not believe that were the Tower Bridge to be built now, that stone towers would be called for by the public." But they were not called for by the public, there they were called for by the architect. But, as a matter of fact, I do not think they will be actually built. I think the public there are against the clothing of the towers in stonework, and there is a movement to leave them in steel. But that is, more or less, a minor detail.

The Forth Bridge is quoted as being a very fine construction, and no doubt it is, but there is in that bridge a little touch of something to which I object. It is almost heresy to suggest it, but there is, in the shape of the bottom booms of the Forth Bridge, a suggestion of an arch, the booms are curved, giving unnecessary trouble, and I do not think the resulting effect is as fine as it could have been if those booms had been straight, as they should have been. I think angularity would have been more effective, and would have been achieved without desiring to be effective, which is even better.

The views of the Plougastel Bridge are very fine ; it is the finest example of reinforced construction in the world. Mr. Ayrton commented on the courage displayed in building it. But I do not think the engineer would call it courage, he would say he knew, which is probably the finest form of courage. At any rate, I think it would have been courage if anybody had tried to decorate it. That was not attempted ; at least I see no reference to it. And I think that decoration was not in place on that particular bridge, or on a bridge of that character.

Mr. Ayrton, on the question of the introduction of reinforced concrete, laid stress on the blame attached to engineers in having no pride in the material they were introducing. As an analogy, I suppose that Christopher Columbus did not express great pride in his achievement when he visited America for the first time, and I do not think we can blame him for not having gone to San Francisco. He was met with two difficulties : first of all, the savages, and secondly, his mutinous crew. I am not suggesting that the savages he met were architects, they were amongst the mutinous crew ; they did not believe he would get there. But the savages he met, and which we meet, are in the nature of cracks in concrete. The engineer, when he introduced the material, found himself in a new world, a monolithic. First of all he thought it wonderful to have a monolithic structure which was without a joint. But he soon discovered that it had peculiarities with which he had to deal ; and those peculiarities were, that it is very difficult to build anything more than about 40 feet square of a monolithic nature which does not crack. As he had to deal with cracks, you cannot blame him for not trying to be effective. If a man tries to be effective before he has dealt with cracks, he is laying himself open to criticism.



WANSFORD BRIDGE ON THE GREAT NORTH ROAD
Mr. Maxwel Ayrton, Consulting Architect, and Sir Owen Williams, Engineer

I do not think you would consider it good taste to see a large crack in a very effective structure.

And now, coming to the " bones " of what I have to say, in the collaboration I have had with Mr. Ayrton I do not think we have ever talked in terms of the architect and the engineer, I do not think it is possible. In fact, I will go so far as to say I do not believe an architect, as an architect, can collaborate with an engineer as an engineer. Two men collaborate and do something, that is a matter for their own mutual arrangement. But, taking an extreme, the finest architect coupled with the finest engineer may produce anything, it may be rubbish, and I do not think it necessarily follows that it will be the finest thing. You have the opposition of two philosophic ideas. If you talk in terms of architecture, which I think many architects do, with some detriment to their profession, in which they claim they are more or less decorative merchants (" No "), I don't know what you will call it. But their objective appears to be ornament. (" No "). There is one phrase here, in which it says, in regard to Westminster Bridge, that " Sir Charles Barry was responsible for its architectural adornment." We are all after the same thing, attempts are made by two paths, and the question is, which path best achieves it? You can either maintain practicality, carry it out to the extremist point. With a philosophical basis, you will in this way produce the finest form of art, that is to say, art is the capacity to do a job, having regard to every condition. Practicality is a method of achieving the effect without making the effect a method of achieving itself. On the other hand, you have a doctrine that by effect, conscious effect, you can deliberately achieve beauty. To my mind, it is similar to a man who sets up in life and says, " I shall be a very beautiful character," and you say to him, " Be honest first, and if you are honest you will be beautiful, but do not attempt to be beautiful and dishonest." And if you can think of architecture and engineering, one trying to be practical and the other one trying to say " We have a God-given mission to be effective," those two things together are actually opposing doctrines which cannot collaborate. I was walking through the Park to-day, and I saw a very beautiful girl ; I do not usually go looking for beautiful girls in the Park. With her were two young men. And as they walked by, both happened to be on the same side of this young lady. And it occurred to me, as a matter of observation—both of them, I think,

BRIDGE OVER THE SPEY AT NEWTONMORE
Mr. Maxwell Ayrton, Consulting Architect. Sir Owen Williams, Engineer

had the same thoughts—that the man on the outside was in a quandary, and I thought, would it not be better if he were on the other side of the young lady? But I think he must have been of the opinion that he had lost it, but that, keeping on that side of her, he would get a few stray glances he would not get if he were on the opposite side to his competitor. And I think that those two competitors for beauty represent very much the position of effect and practicality. I do not know which should retire, but I do think one of the two gentlemen ought to retire in favour of his opponent.

I have nothing further to say, but I thank you for this opportunity of speaking.

Major H. E. CRAWFURD, A.F.C.: I hardly meant to say anything, Mr. President, but I am rather stung into activity by the vista which Sir Owen Williams has given me into the subjects of research into the professions of engineering and architecture, and the paths which they pursue; and it does give me the opportunity of saying two things. The first is a word of thanks to the Council of this Institute for the treat, the dual treat, they have given me this evening. I speak, of course, always under the fear of instant correction, but I have always assumed that a part of the architect's job is to secure an adequate balance between two or three things. This evening they have secured a perfect balance between the gastronomic entertainment and the subsequent intellectual entertainment. Secondly, there are very few people more qualified to add a word of appreciation to what Mr. Percy Harris and Sir George Humphreys have said with regard to the reader of this paper; and perhaps I may be forgiven for one or two sentences in that behalf. Mr. Ayrton and I spent a year together during the period when, you may remember, we were having a little trouble with certain foreign countries, between the years 1914 and 1918, and I was able to form a very good idea of Mr. Maxwell Ayrton's qualities. I remember particularly his gift of direct and forcible speech, and I have been amazed—knowing him as I do—at his restraint in the reading of his paper this evening, particularly when he referred to the better half of the combination. But I admire him for that restraint. I also remember, because at that time I was Mr. Ayrton's commanding officer—since then our relative positions have been restored nearer to what they ought to be—I also remember that though he was in that position he was never at a loss in telling a man what he thought of him. Therefore, as I say, I

admire the quality of restraint he showed in what he said.

As a late member of the Royal Commission on Transport, which has, fortunately, ceased its sittings, I come here as an amateur, rather as a cuckoo in the nest. My interest in bridges is, of course, not the interest of the architect or that of the engineer. The question of whether concrete should or should not be covered with cement, for instance, has a purely academic interest for me. I would as soon discuss with Sir Owen Williams, for example, as to whether lips should or should not be covered with lipstick. It seems to me to be as important, for, from the purely æsthetic point of view, remembering the example which Mr. Ayrton showed us of the granite-covered bridge, the only really important thing is that you should not see where the lip ends and the lipstick begins. I can see a point in that. But the really important point is, What is the function of lips? or what is the function of bridges? Knowing Mr. Ayrton as I do, I was pretty sure that we should not get from him any philosophic definition of a bridge; that we should get no answer to the question, "When is a bridge not a bridge?" And, knowing I could not get this, I took the precaution of consulting the Smaller Oxford Dictionary before I came, as to what a bridge is. I find it is this: It is "a platform amidships for the officer in charge." Alternatively it is "a prop under violin strings." Alternatively it is "the upper or bony part of the nose"; and, lastly, it may be "a structure carrying a road or path over a stream, ravine or road." Now, may I be forgiven, in the presence of the engineer and the architect, in suggesting that the essential part of that definition is, not that it is a structure, but that it carries a road or path. And what interested me in Mr. Ayrton's paper was the contrast which he drew between those who look back and those who look forward. I am with him in liking those who look forward, and I am hoping very much, Mr. President, to be your guest again—on general grounds, of course—but also in particular when some distinguished member of this Institute reads a paper, or, maybe, when there is a duet between Mr. Maxwell Ayrton and Sir Owen Williams, when "The Bridge as an Essential Part of Modern Transport" will be the subject, and not so much the construction of the bridge. Then I shall hope to see a good result. I agree with Sir Owen Williams that when you get two people of this calibre together they do not need to remember always that one is an architect and the other an engineer; they simply want to remember they are two men tackling one problem.

I almost trembled when my respected friend Mr. Percy Harris was introduced as the person who had helped so much with the Architects' Registration Bill. May I say, in your presence, that there is too much registration in modern life. There is too much regimentation and rationalisation, and putting people together into categories, and keeping them there. And what this country is suffering from, in the realm of transport and elsewhere, is the lack of the spirit of adventure, of which Mr. Ayrton spoke. May I illustrate it with a little fable? It was written many years ago, by a man since dead, the Rev. E. P. Barrow, who used to preach in Manchester. A number of young swallows were gathered on the telegraph wires, waiting to make their first flight to the south. While they were sitting there, waiting for the older bird to come up and give them the signal to start, a sparrow, which had never been out of the street, flew up beside them. And the sparrow said to the young swallows, "Where are you going?" "We don't know, but swallows always go somewhere at this time of the year." The sparrow said, "Which way are you going?" "We don't know, but swallows always find a way." "Why are you going?" "We do not know, but swallows always do." And the sparrow said, "If I did not know where I was going, or which way I was going, or why I was going, I don't think I should go at all." At that moment the old swallow flew up and overheard him, and he said "Neither should we; if we were sparrows." For the architect and the engineer alike, and for every other craft and profession in this country that is the right motto. And I want to look forward to the time when you people will not wait to be called in to bridge a particular river, but when you will seek the problems in advance, and suggest remedies for them. My interest in the bridge at Plougastel was not the marvellous adaptation of means to an end; the thought I had was, what was the importance of the route which led these people to take all these pains to construct this magnificent bridge? This country, under a supine administration and under successive Ministers of Transport, whose sole qualification is inertia, is crying aloud for improved means of transport. I want Mr. Ayrton and Sir Owen Williams to bend their brains to the task of giving us bridges in London, whether they are concrete or steel, whether they are covered with granite or with inscriptions, whether they have pylons or not I do not mind, so long as they enable people to get quicker from one place to another; and it is in that hope I give you my best thanks for allowing me to be present this evening.

Mr. H. M. FLETCHER [*F.*]: I am afraid Major Crawfurd is a sparrow. He is a very admirable sparrow, but he sticks to the bridge when he ought to be banking on the aeroplane and the airship. Is the bridge necessary any longer?

To come back to bridges, I do not see why Sir Owen Williams draws an opposition between efficiency

and finish. Surely every fine craftsman wants to do something more than just to make his work efficient; he wants to finish it. I will take an example I have seen. I had to wait three-quarters of an hour at a junction on the Strasbourg line a year or two ago, and I saw a most magnificent reinforced concrete bridge, carrying a road over the railway. Every part of it was finished in a characteristic way. Those which bore the great loads were rough, bush-hammered—if that is the right term. The parapet was finished quite differently, in order to express its different function. Some parts were of fine smooth cement, and others were tooled in various ways. All that work, it seemed to me, was well bestowed on that bridge. I was very much interested in what Mr. Ayrton said about the ways of finishing concrete, and I feel we have much to learn from abroad. It was Sir George Humphreys who said that in some ways continental nations were ahead of us. Speaking in the presence of so many distinguished engineers I do not like to make definite statements, but I ask whether there is any institution in England comparable to the Institution of the Ponts et Chaussées in France, which has been going on for generations, and develops gradually, and by tradition, the designs of bridges. It seems as if every man in our engineering profession were doing his own exploration, whereas there must be something to be said for a system of training and tradition which takes hold of the basic principles of bridge design, and applies them to new methods and new materials. It is not the architects who want to decorate bridges with classic trappings; I do not know who it is, but it is a general body of timidity which requires those things to be put on; and if Colonel Bressey would send designers who like these trappings to the Pont du Gard, he would see that the people who invented them knew when to do without them.

The PRESIDENT: We have had a very delightful lecture, and an excellent discussion to-night, and on your behalf I thank Mr. Maxwell Ayrton. We have heard much about tradition, but, as far as I know, we have no tradition in bridges, except what the Romans have left us. You can see hundreds of bridges over the Roman Empire which were built two thousand years ago without any of the Orders of Architecture which have been referred to. In fact it is obviously a case in which such features are out of place. I thought the steel bridge would have been compared with the reinforced concrete bridge and perhaps Mr. Ayrton can deal with that in his reply. We know that if you use a steel structure, like that of the Forth Bridge, the cost of painting is a very large item, and in the case of the Eiffel Tower it is so great that many times it has been suggested that it should be pulled down.

I have much pleasure in putting the vote of thanks to Mr. Maxwell Ayrton and he has seen it has been carried with acclamation.

THE LEE VALLEY VIADUCT
Mr. Maxwell Ayrton, Consulting Architect. Sir Owen Williams, Engineer

Classic Forms and British Geology *

BY H. BAGENAL [*A.*]

IN an essay entitled "The Romance of Silica," Mr. Sergeant (then chairman of the Yorkshire Branch of the Institution of Structural Engineers) gave a Leeds audience in November, 1928, a remarkable history of a grain of silica in its character of the most enduring particle on the earth's crust. He ended with the following words: "In this world of change and decay, where the very molecule itself is continually entering into new alliances, the silica molecule—alone, I think—displays a constancy of resistance which has now been accepted as a very great virtue, and the very word "inert," sometimes applied in a depreciatory sense, can now be held synonymous with the highest of all human virtues—constancy of purpose under adverse circumstances."

That essay gave me, as an architect, a great deal to think about. All builders, whether architects or engineers, should know something of geology, if only to recognise the cosmic labours that have preceded their own appearance on the scene. To produce the kind of sedimentary rocks (to mention no others) suitable for building, the various geological horizons have risen and sunk thousands of feet several times, encountering earth pressures, sea washings, river rollings, wind scourings, for millions of years. And all, of course, providentially in order that they may become masonry walls, lintels, columns, cornices. This being so, I think we ought to do better by them. Providence must often be disappointed when she glances at some of our architectural features. The noble material is often stamped with the confused mind, and man who has it in his power to give "form" like a crown upon a natural process, often in architecture, fails to do so. But first let me say that personally I feel that the idea of enduring—the idea of permanence—is in a special sense at the root of architecture. The attitude "it will last my time" is not only poor-spirited but is also a betrayal. When architects take that attitude they are cutting the ground from under their feet. By what right does any single generation in the grand entail of architecture say: "*My* situation is different to any builder before me. *My buildings need not last.*" This attitude, in the domain of practical affairs, with its 11 in. hollow walls, with its cheap rapid processes and patent brief materials, is in my view a huge economic fallacy, and will cause, in some future period of world depression, the leakiest properties and worst slums yet known. At any given time the community is inhabiting buildings whose average age is much more than 30 years, is relying, generally speaking, upon the good work of builders dead and gone. Cheap building is bad building.

But how does such an attitude influence the spirit of our work? Look for a moment at some of those constructive systems that are both antique and also active in our lives to-day—Greek Art, Roman Law, English Equity—three great vehicles that follow the generations. In them, there is the conscious will to posterity. They are the product of men who believed in concepts of enduring beauty, order, justice. Are we architects no longer to believe in an equilibrium that is permanent, in a beauty that shall endure. In New York to-day, I believe the expectation of life of a building is seven years. Now, the danger is not so much that in a frantic and materialist age like ours the standard of values of the speculator should be temporally accepted by the semi-educated: the danger is that the educated shall acquiesce in them and allow the attitude "it will last my time" to sink down in to us and become sub-conscious to all our design. Even if we cannot build *for all time* we should try to do so; we should *design for all time*: that is to say, we should desire and prefer the permanent, and advise our clients that their attitude of short views is wrong, and ours of long views is right.

I want to-night to try to re-interpret the term "monumental." The results of post-war archæology seem to show that however far back we go, the utilitarian and the ritual motives are still side by side, not one more important than another, but both equally important. Now this equal significance of two opposites is a very disagreeable and unpopular theory nowadays. We like to say "all hinges on this or on that"; we do not like to say the truth is that two irreconcilables are always, and have been always, side by side in human thought and activity. Yet such is the case. You know those isolated columns depicted on Greek vases standing with wide echinus and supporting a cock as an offering to Æsculapius. It is exactly the same column as on another vase, supports a lintel with haphazard triglyphys and a roof above it. The Greeks with their usual lucidity recognised that a column was both a votive object and a support in a structure. And so are columns to-day—so are all architectural "features." They have image value and structure value both, because both are the

* A paper read before the West Yorkshire Society of Architects on 26 February 1931.

Photo: H. B.

FIG. 1. BAILDON. ELDWICK OLD HALL (1696)
Front to Road

requirements of the human mind. We have a good illustration of it in modernist design, where the window-pane has become the ritual shape. These modernist window-panes are often expensive, structurally bad, and let in the noise, but they are necessary to show the new style. When style is turned out of the door it shows itself in the window. But why not recognise this? Style is inevitable, but it need not inevitably be confused and dull. Many modernist buildings convince us because their designers have talent and faith, and this shows itself in graceful forms. But the traditionalist can also turn the searchlight of intelligence upon academic forms, can penetrate, re-interpret, make them beautiful, and, most important of all, use them appropriately.

But first we must recognise how in architecture style hinges on the idea of permanence. *Stone* building (with the possible exception of a few geological areas)* was originally ritual building invariably; it was the imitating of a perishable material in an imperishable. The shrine or public building was a house in stone that would endure. The process was salvation by masonry; all building stones were precious stones, and the quarry was sometimes recognised as sacred. Thus we read that Athena intended the Acropolis at Athens as the site for her shrine, and Mt. Lycabettus as a quarry. And the Parthenon—wholly built of Pentelic marble, the sculptor's material—was first and foremost a shrine for the cryselephantine image of the goddess. It was to endure. And who can touch the history of that age without recognising in it a belief in an *immortality through sheer excellence of achievement?* The thought is expressed in words by Thucydides in the funeral oration of Pericles:—

> "The admiration of the present and succeeding ages will be ours since we have not left our power without witnesses, but have shown it by mighty proof . . . We have forced every sea and land to be the highway of our daring, and everywhere, whether for evil or for good, have left imperishable monuments behind us. Such is the Athens for which these men . . . nobly fought and died."

* Those areas, for instance, such as shale and carboniferous limestone, where field stones could be used easily for hut building.

Photo : H.B.

FIG. 2. BAILDON. ELDWICK OLD HALL
Garden Front

In the field of architecture, in order to leave an imperishable monument, it was necessary to use the best stone and the firmest structure ; but also the shapes must be refined to an unanswerable gracefulness. From these motives grew originally those classic forms with which we are familiar. Pentelic marble, the final material, succeeded Poros stone. Pentelic is almost pure carbonate of lime. I do not know its strength, but that of Carrara marble (also a very pure carbonate of lime) is about 280 tons per square feet in compression and about 800 lb. per square inch in bending. With a factor of safety of 10, that would mean about 80 lb. per square inch. Lintels could be procured out of the quarry 12 or 13 feet long sufficient to give room for the passage of a chariot. (Span of the central lintel of Propylæa is 13 ft. 9 in.) The arch was known by the Greeks, both round and elliptical, but not used ; lintel structure is more *monumental* than arch structure, because it is more enduring. The arch never sleeps. But lintels were chosen carefully and a factor of safety provided by using three separate lintel stones side by side (as in the Parthenon). Also, the lintel must not be overstressed by too great a superimposed load ; hence among other origins) the " metope " opening, a word meaning space between beams. Originally the Doric frieze was a series of openings or windows, serving among other purposes to reduce load. The cornice above in Greek Doric is a good covering slab or corona with a square corbelling or bed mould under it and a gutter or cyma on top. Now it is not possible to show that Greek Doric is an *exact transcription* from structure ; but it is possible to show that the art of Greek Doric includes the *idea of articulating structure*. No architecture is completely literal. But the Greeks kept to the rationale of their shapes. The Greek Doric architrave is deep and plain. Contrast the Roman—thinner and divided up. Greek bed moulds are convex or rectangular for carrying load, not concave. Columns are members carrying *concentrated load*, therefore they have vertical lines. Contrast our Renaissance method of breaking up a pier with horizontal channelling. Behind the columns the Greek cella wall is recognised as well able to carry the beams without added pilasters. The Greeks had antæ but not pilasters. In a Greek cella wall, doors and windows could come where they liked ; they were not dragooned by a series of useless pilasters. And finally the whole surface of the building was designed to reflect light. The stylobate was a

mirror throwing light upward. The various inclined surfaces in this light were then enhanced and the lines of mouldings emphasised by colours; finally bronze and gold points played their parts. Such, briefly, was the Greek architectural method.

Now, in designing a classic building to-day, we can either build a meaningless mask using classic forms as they have since been muddled up by the Romans and Renaissance men, or we can do what the Greeks did and give our buildings and the parts of our buildings the idea of an underlying structural principle. The structural principle must begin with the stone. In England we have lintels in order of strength somewhat as follows :—

Stone.	Breaking Stress in Bending. lbs. per sq. in.	Breaking Stress in Compression. Tons per sq. ft.
Grey Granite	2,712	380
Quarzite	2,354	230
Portland (Base Bed)	1,448	260
York Stone..	1,124	540
Hopton Wood	1,003	180
Red Mansfield Sandstone ..	666	160
Bath Oolite	609	73

These figures are for breaking stress and a factor of safety of 10 or 20 should be allowed. The compressive strength is given in the last column for comparison. The figures are taken from Baldwin-Wiseman's tests* quoted by Howe in his *Geology of Building Stones*. It is interesting that York stone, which is the highest against compression, is only fourth in efficiency as a lintel. But, of course, other factors enter—reliability of the stone itself, that is freedom from cracks, and secondly the danger of settlement in the building and therefore resistance to unequal loading and increased " shearing." If one goes about looking for cracks in lintels, it is surprising how many one finds. If they occur in the centre they are probably due to failure of the stone itself, if they occur over the bearing they are probably due to a settlement causing an increased shearing stress.

The safe shearing strength of a stone is considerably less than the bending strength, but is roughly in the same order of efficiency. Where there is danger of settlement there is the Greek method of leaving a triangle over the lintel as in the walls of Messenia, and filling it in with a light carved panel. There is also the Roman relieving arch and the Roman flat arch. In the Forum of Augustus you can see both—the one over the other—built in Travertine voussoirs in a wall of Tufa. A flat arch, however, is not a lintel and never, to my eye, looks like one. It should have a slight camber and then a key block looks right.

* Baldwin-Wiseman, *Effect of Fire on Building Stones*. Trans. Surveyors' Institute, Vol. XXXVIII, 1906.

Photo : H. B.

FIG. 3. LEEDS. HOUSE ON WOODHOUSE MOOR

In the town of Carlisle and elsewhere they cut stone lintels to look like flat arches and bring them over an inch on the imposts ; they look neither arch nor lintel, and are a type of confused design.† But of course we could find worse confusions among the stock Anglo-Palladian doors and windows—for instance, the piercing of architrave by an immense key block breaking up into a pediment above. Palladio at Vicenza was imitating classic forms in plaster and his material yielded him many unintelligent forms that have passed into English.

The bearing stones are as important as the lintel ; they carry a concentrated load. In Somersetshire villages near Doulting, one finds houses of rubble (lias limestone and conglomerate) with Doulting dressings. Doulting stone—an oolite—is not strong in bending. The lintels are made very deep and look

†It is interesting to note, however, that stone window heads cut with haunches in this way rarely crack in the centre, though they sometimes shear at the sides. The two types—true lintel and haunch lintel—cut out of limestone roughly equal in depth can be seen and compared in some old house property in Cambridge in the neighbourhood of the Newmarket Road. The true lintels have both cracked and sheared, the haunch lintels have only sheared, and to a less extent—that is to say, the splaying of the haunch is sufficient to convert from lintel principle to arch principle. The lintel really becomes then a monolithic arch, and this should be expressed by a slight camber on the under-side.

Photo : H. B.

FIG. 4. LEEDS. HOUSES NEAR RAWDEN

admirable ; the rubble walling requires jamb stones. The rubble filling is sometimes plastered and painted and the structure stones left. When in additon the house is neatly proportioned and given a cornice and low pitched roof—a perfect classic building is the result.

The West Riding of Yorkshire consists geologically of the Coal Measures and Millstone grit lying between the Magnesian Limestone on the east and the Carboniferous Limestone on the west. Travelling by the Great Northern line I always feel that the West Riding begins at Spofforth where, in the Castle, the two materials Magnesian Limestone and the grit are combined. The Millstone grit is a whole region of silica with its characteristic forms. Of first importance is the pitch of the roof. In the Middle Ages the pitch was probably high, owing to timber construction and thatch. My friend Mr. John Dower, in some notes he kindly sent me, points out that " oak and other woods were always fairly abundant in the valleys, and there is evidence that early West Riding building made use of heavy timbering for lintels, posts, and the like, as well as for crucks and principals and framing of the roof . . . . The nearly complete absence of buildings other than churches and castles older than 1550 seems to point to timber framing, together with wattle and daub, as the typical medieval method of building here as elsewhere, with stone used only if at all in low foundation walls."

Whereas in the Cotswolds the light small stone slate has preserved the Gothic type to this day, in West Yorkshire the heavy stone slate brought down the pitch. The character of the Yorkshire Manor House is first given by the massive gable-end which so easily becomes a pediment. The magnificent old house, known as Eldwick Old Hall, at Baildon, near Leeds, is a good example (Figs. 1 and 2). When a medieval string runs across a gable end as at Hawkesworth, we can see the pediment before its time. This wide gable end gives to small farm houses a true classicism (see Fig. 5), and when the end is made the entrance front, as at Beckett's Park, Headingley, a fine and highly individual Renaissance type emerges.

Now the grit stone not only makes a superb wall when it is scoured by rain and its quartz grains flash out as from a kind of moleskin texture : it is also, when properly selected, the most enduring : it consists of the inert silica. In addition the rock gives long

Photo : H. B.

FIG. 5. LEEDS DISTRICT. OLD FARM HOUSE

lintels, jambs and dressings. These stone lengths originally enabled an imitation of timber work seen in window mullions, and in the carrying up of the central mullion of a gable window to end in a roof finial as at Riddlesden near Keighley. But they provided also a definite classic instrument in the strong lintel. An example of a natural classic rising from the use of such jambs and lintels can be well seen in some cottages on Woodhouse Moor off the Headingley Road (*see* Fig. 3). Some of the early manor house lintels are very deep and give a field for carving. Anglo-Palladian builders like Carr of York generally missed the structural reference and treated sandstone forms like limestone or plaster forms ; but in the 18th, and early 19th century, mills, houses and factory buildings, we can find the lintel coming into its own and showing here and there, in stark and sooty isolation, the grandeur of a true classicism. Often one looks at some such lone structure (consider for example the recessed cottage group in Fig. 4) and it seems to ask for a touch to set free the hidden beauty in it. The builder has just not done what he might have done. His structure is free to speak but is just not articulate. The lintel is the first and most important statement in classic design. A good lintel carrying the full charge of the load is a beautiful thing—a thing to be enjoyed. It has only to be clearly and directly stated.

Now there is an artistic advantage in direct statement. There are some writers who for " birds " prefer to say " feathered songsters of the grove " and for fishes " scaly denizens of the deep." The advantage of " bird " over " feathered songster " is due to the fact that for feathered songster the reader does not get any equivalent emotion for the added slight expenditure of attention. The adjective (said some French stylist) is the enemy of the noun. Adjectival design fatigues the contemplating eye. Graceful, direct design pleases the eye even when it is as severe as the grit stone farm house shown in Fig. 5.

I am not pleading for *structure for structure's sake* that is for engineering, I am pleading for *structure for art's sake*. A work of architecture remains a structure problem and an art problem side by side but the art problem is always the more difficult. Now direct statement of structure makes the art problem easier : it helps to narrow it down. Instead of having in a design a hundred shapes all more or less meaningless

to choose from, as happens when for instance we are doing a half inch sheet for a set of competition drawings—we could limit ourselves to a few that are really appropriate : and our talent and imagination could then expend itself upon artistic realities. This narrowing down of the artistic problem to defined limits is the great lesson, to my mind, of Greek art. A Greek temple is *both* the simplest *and* the most imaginative of buildings.

But I am not seeking to belittle the real lesson of the Anglo-Palladian school of the 18th century—the canons of symmetry, of clean proportion, of axial planning are most important. I want all that, but more : I want in addition the idea of clean graceful structure informing every detail of a building. The mouldings, for instance, should become expressive again as they were in Greek times, and as they are in the best furniture.

Finally—but most important of all—there is the question of surface brightness. In Leeds we have a problem the antithesis of the problem in Athens. A Pentelic marble building is so bright it requires to be reduced with ochre ; in Leeds the finest sandstones go a matt black.* The whole building tends to disappear. No doubt one solution is to carry Portland stone hundreds of miles and build London buildings in the Leeds streets. But then the power, the individuality, the Yorkshire character has gone. I would not personally exchange the Stygian Baroque of Leeds Town Hall for the snowiest of Portland if I could do so to-morrow. There are better models in the classic Elbe sandstone buildings of Germany and in the London stock brick buildings that have gone black. In these the basis of design is to provide bright lines and small significant surfaces *kept painted* upon the dark field of the stone. Thus an old London house looks smart because its reveals, sills, cornice and hall door, are kept painted. If architects provided the right apron panels, sills, strings, reveals, *easily accessible* and to be kept painted as part of the terms of the lease a Leeds street in Millstone Grit could look as smart as Portman Square. The old Regent Street buildings had to be painted every three years—that was part of the terms of the lease and a tenant entered on those conditions. In the poorer parts of Sheffield street after street can be seen from the railway carriage window, kept bright and smart by the use of bath stone on sills and strings and door-steps. The bright little licks of colour show up on the dark brick fronts. In the city of Bath reveals to windows are kept painted.

And for monumental buildings there is an element in design that should always be provided—that is one or two points or lines of gold. If I were a rich man I should offer to gild the bed moulds of Leeds Town Hall and keep them gilded. The whole design would then leap into life.

Exhibitions.

THE ROYAL ACADEMY 1931.

This year's exhibition of architecture at the Royal Academy leaves an impression of restlessness and uncertainty, and may thus be considered as representative of the state of affairs in English architecture to-day. The layman, always in search of to-day's "style," must have an unhappy time, and his difficulties will be increased by the lack of coherence in the presentation of the various drawings. A few are obviously architecture, many are mere water-colours, and one at least would make an excellent poster. Some of the large perspectives are very papery, and must have been disconcerted to find themselves in company with Nos. 1415 and 1419 (Merchant Taylors' School : W. G. Newton and Partners), which are fine, solid representations by Mr. E. J. Thring of good English work which obviously lent itself to such treatment. No. 1415 is especially good in its tone values. The same firm puts the profession under a further debt by sending an excellent working drawing (No. 1414).

At the poles of presentation are No. 1361 (House of Mercy, Horbury, Yorkshire : John D. Clarke and Worsfield), with its straightforward, early-nineteenth century portrayal which makes the architecture speak for itself, and No 1367 (Lloyd's ; ante to the Room : Sir Edwin Cooper), where Mr. Walcot is content to leave the architecture to the imagination.

The hanging of the drawings is no more helpful to a coherent view of modern architecture than is their presentation. The constant readjustment of atmosphere is irritating. One steps straight from the entrance corridor at Lloyd's into a hillside house in Cumberland : a building in Rangoon is sandwiched between an English public house and a welfare centre in Chelsea : elevations of the British Medical Asso-

* Only however when the stone is given a smooth ashlar finish. There are many tooled stone buildings that have not gone black in Leeds ; for instance, the Catholic cathedral by Eastwood and Greenslade.

ciation crop up in different parts of the room; while some of the stained glass has strayed from its own corner and intruded, quite unwarrantably, among the architecture. Altogether one feels that the room might have been much more helpful and much less irritating if there were some convention as to presentation and some attempt at orderly hanging. One would not ask for cohesion of architectural thought.

The designs vary from traditional to experimental, if one may still class the flat-roofed, all-window type in the last category. The ecclesiastical work in particular shows signs of growing pains. The striving after dramatic effect may be in keeping with modern tendencies in religious practice, but it seems to lead to a lack of scale. From the padded seat in the centre of the room the writer mistook a village church for a cathedral and a cathedral for a village church, but this was probably his own fault. No. 1335 (Design for a Cathedral: Roger A. P. Pinckney) shows an interesting variation in church-planning and an unusual suggestion for a neo-gothic west end. Some of the collegiate work, on the other hand, shows no signs of growing pains: apparently education is not expected to move with the times.

Official architecture takes a sound halfway line between ancient and modern. The fine housing work of the L.C.C. is well represented by No. 1342 (Dog Kennel Hill Estate, Camberwell: G. Topham Forrest), showing a good treatment of a town on a hill. But one is inclined to regret the arch on the axis: it looks so lonely. Nos. 1354 (British Museum Newspaper Repository Buildings, Hendon: John H. Markham) and 1389 (Valentine Telephone Exchange: Christopher Bristow) are excellent examples from the Office of Works, though the tendency to overemphasise the keystone seems illogical in a modern building. In Nos. 1379 (St. Margaret's House, Wells Street) and 1410 (Flats, Kensington Square), Messrs. Richardson and Gill show the restraint and eminent sanity of their work. In No. 1336 (Municipal Buildings, Worthing: C. Cowles Voysey) we have a pleasant glimpse into the classical, while in No. 1387 (Freemasons' Hospital, Ravenscourt Park: Sir John Burnet and Partners) we have all the accoutrements of the modernist charmingly displayed—angle windows, rounded ends, ships' decks, and cubism. But surely the seaweed is out of place on so trim a building?

Nos. 1359 and 1397 (Wayside Inns: Hugh P. G. Maule) show two "good pull-ins" for those of refined tastes. The view that the modern inn is becoming more of a private and less of a public house is reinforced by No. 1385 (The Greyhound, Wembley: Ernest B. Musman), which presents a pleasant "client's sketch" of a gentlemanly building.

The domestic work shown ranges from No. 1360 ("Tragarriff," Bantry Bay: Briant Poulter) with its romantic but well-knit plan and elevation in the stone manner, past No. 1375 (The Presbytery, Hythe: Arthur R. Welby) and No. 1383 (Proposed House in Herts: C. M. Crickmer and A. Foxley), both representing sober symmetry, to excursions in the modern manner such as No. 1366 (Sun Roof House, Bickley), where Mr. P. D. Hepworth shows his versatility in a design of distinct modernist flavour, and No. 1392 (House at Beaconsfield: Stanley Hamp), where round arches are boldly mingled with flat roofs and round-the-corner windows.

No. 1462 (The City: William Walcot) seems to have strolled into the wrong building. Was it not meant for the Exhibition of Modern Transport at the R.I.B.A.?

The absence of any work by Sir Edwin Lutyens or Sir Giles Scott is to be regretted. H. P.

THE ARCHITECTURE CLUB 1931 EXHIBITION

REVIEWED BY H. AUSTEN HALL [*F.*].

THE fourth Exhibition of the Architecture Club, now being held in the Mansard Galleries, Tottenham Court Road, is in some ways the most interesting, although by no means the largest exhibition that has been organised by the Club since its foundation.

It reflects with considerable accuracy the mood of the moment in which we feel that content with traditional forms is disturbed by the desire for what is called a modern architectural expression. Although many of the subjects show how successful the modern manner can be in capable hands, nevertheless the feeling of disturbance remains.

When Mr. Milne shows his new interiors for Claridge's Hotel (No. 57) he shows us very capable work, but his traditional houses are better. Mr. Hepworth's versatility is truly amazing, from the Labourers' Cottages at Dunton Green to the houses at Headington and Bickley, the last with all the usual devices of modern construction. It is all very competent, but the labourer is better off at Dunton Green.

The Underground Railway Offices by Adams, Holden and Pearson are too well-known to need description, but the inclusion of this building among other contemporary work only enhances the outstanding ability of the design. It is interesting also to have a view by night for comparison, as all modern buildings have to be designed for the desired effect by day and night lighting.

Undoubtedly the most interesting exhibits are the photographs of New Delhi, showing Sir Edwin Lutyens'

Viceregal Lodge and gardens. This superb collection of photographs has not been seen before in England, and for the first time we are able to grasp the splendour of this conception. It will be new to many people to find that every aspect of the Viceregal house is seen across formal courtyards and gardens, with many fountains and ornamental waters, so that the vistas leading up to the central dome, from whatever angle it is approached, are never lacking in interest.

The buildings have been so admirably written about by Mr. Byron in the *Architectural Review* that further descriptions can add nothing to what has already been said so well.

The Douglas Haig Memorial Homes at Liverpool by de Soisson and Wornum are on the general lines of those by the same architects at Morden. They show the completely successful way in which the architects have interpreted the purpose of these homes. There is something essentially right in their conception of these buildings, both as homes for disabled men and as a memorial to a great soldier who liked simple things.

Mr. Chermayeff sends interior photographs of his decorations at the Cambridge Theatre, which was built from the designs of Wimperis, Simpson and Guthrie. This theatre is still the best of the modern interiors in London. It has probably done more for the modern spirit in decoration than any other building in London.

Mr. Chermayeff's own house looks rather like a laboratory. To those who embark upon a career of modernism it shows what may become of them before they have finished with it, but that it is clever and stimulating no one will deny.

Mr. Adrian Gilbert Scott shows his own house, "Shepherds Well," Hampstead. This is all that an architect's house should be, and is one of the outstanding things of interest in the room.

Mr. Clough Williams-Ellis is always surprising and his model of the Ladies' Carlton Club Swimming Bath is one of the most amusing things in the exhibition. How much better it looks in the model than in the photographs, which are necessarily confined only to portions of the interior. His village of Portmerion is one of the greatest jokes ever perpetrated, but it is more than that, for the people who go there year after year find its attractions are more than superficial.

In a short notice such as this it is impossible to mention all the exhibits that deserve notice, but it is necessary to say how admirably the exhibition is arranged and how greatly the introduction of certain decorative hangings and some fine pieces of furniture and objects of art aid the general appearance of the galleries.

Some of these exhibits are lent by Messrs. Heal and Son, to whom the Club is indebted for the loan of the galleries.

The exhibition is not large enough to be called representative of modern British architecture, but it does contain some of the best work that has been done within the last four years and no one should miss seeing it.

Reviews

BUCKINGHAM PALACE: ITS FURNITURE, DECORATION AND HISTORY. *By H. Clifford Smith. Introd. by C. Hussey.* 4*o. Lond.* 1931. [*Country Life.*] £4 4*s.*

Reviewed by DARCY BRADDELL. [*F.*]

Mr. Clifford Smith tells us in the preface to his book that originally he set out to write an illustrated catalogue of the furniture of Buckingham Palace, and then discovered that he could not stay his hand there, but would have to include the decorative art with which it was surrounded. Once that was done, obviously the fabric and the history of the site would have to be tackled. He was in the same position as the man who bought the Persian rug for his drawing room and found he had to alter the fireplace to make it worthy of the rug, then the room to make that worthy of the fireplace, and so on until he had finally rebuilt the entire house. From beginnings, then, which were always going to be rather formidable, far more so than the mere buying of a rug, grew a task, the magnitude of which would have deterred all but the most determined and indefatigable of men. Fortunately for the student of art the author was no weak-kneed pusillanimous creature. Instead, he set to work with a will and brought his self-imposed labour to a highly successful conclusion. He has produced an extraordinary readable work of the widest interest that will delight a varied public. It represents an enormous amount of research which, when served up as a dish, might so easily have become stodgy. This fault has been most successfully avoided. With the help of Mr. Christopher Hussey, who is responsible for the first two chapters, Mr. Clifford Smith has produced a very good mixture of light reading matter with a highly scholarly critique that never loses its importance or interest. Although it is to the first part of the book, which deals with the tortuous history of the site and the various delightful buildings which once occupied it, that architects will naturally turn, it is the later chapters on the furnishing and decoration of Carlton House and the Brighton Pavilion (which played so great a part in the making of the present Palace) that are as informative and amusing as any to read. Every book worth writing has a hero, and the hero of this book is the father of the Buckingham Palace we all know and love, George IV, for whom the author has surely a weak spot. He pleads with considerable show of argument that "the first gentleman in Europe," so far from being the incorrigible vulgarian depicted by Thackeray, was in fact a man of great vision. Certainly he was not without his faults, a trifle extravagant perhaps at times, but on the whole more sinned against than sinning. Was it not His Royal Highness, for example,

who had the sense and good taste to employ Nash, the first and possibly greatest of all English town planners? Did he not champion Henry Holland at Carlton House for more than twenty years until that remarkably versatile artist's death in 1806? True, once his mentor was safely under the sod, he instantly set about refurnishing the whole place with the help of his friend Mr. Walsh Porter. But why not? The Prince Regent was *arbiter elegantiorum* of all Europe; it was for him to set the fashion and he thought it was time there was a change from Egypt, Greece and Rome. A fresh country must be tried —happy thought! Why not India? The modest retreat which Holland had built for him at Brighton was the place for the experiment, and that grotesque bubble, the celebrated Pavilion, was the result. Holland's death seems to have sounded a clarion call to every sort and kind of tradesman to try his hand at decoration for his royal client. Mr. Clifford Smith has reconstructed a vivid picture of the times, largely from the enormous file of bills to which he was granted access. He has some very interesting things to say about Holland himself, to whom he attributes the basis of the true Regency style, and he places Chippendale, Hepplewhite and Sheraton in a very different category to that in which one was brought up to believe them to be. There is, in addition, an account of the last days of Nash which makes particularly sad reading to architects. His pitiful attempt—pitiful because it was so unsuccessful—to shield his royal patron before the commission appointed to investigate the king's debts, his heckling by its members, bursting with middle-class indignation at the wickedness of such princely extravagance where the decoration of a mere building, even though it were a palace, was concerned; the cheap satire of the back-bencher who calls his dome "a wretched inverted egg-cup," and his subsequent attempt to enlist public opinion; finally, the ignominy of his dismissal by a second select committee after the king's death when he was eighty years of age. All these events make an undeserved end to the life of one who was a very remarkable man and to whom Londoners owe a great debt.

Of the vast, interesting and incredibly rich contents of the palace, the author makes a meticulous catalogue, magnificently illustrated, which occupies the last one hundred and forty pages of the book. He takes his reader on a tour room by room. Up the grand staircase, past the guard chamber, along the great corridors to the Drawing Rooms, white and blue and yellow, he leads him. The Throne Room is visited, the Picture Gallery and the Music Room and the Chapel and the State Dining Room; these and dozens of other rooms are entered and shown off. The whole majestic panorama of the palace is unrolled before the reader's eyes. Nothing is missed. There is the history, the authorship, the price of every piece of furniture, clock, chandelier and ornament. The book is indeed a monument to Mr. Clifford Smith's untiring scholarship.

HOUSING, 1928–30. *London County Council. La.* 8*o. Lond.* 1931. [*P. S. King and Son.*] 2*s.* 6*d.*

Reviewed by P. M. FRASER [*F.*]

This finely illustrated book is the third of a series of volumes describing in detail the London County Council's vast undertakings during the last 70 years. The information is given in a succinct and lucid form, and deals not only with the design of housing estates—mainly outside greater London—but also with the improvement and reconstruction of unhealthy areas. The L.C.C. have completed 63,000 houses, and are embarked upon schemes comprising another 35,000, the whole being estimated to cost over £50,000,000—some idea, therefore, of the scope and value of this work will be possible.

Schemes of such magnitude involve, as a matter of course, questions of Town Planning and Regional Planning. In this respect it may fairly be said that there appears to be undue economy in the purchase of sites; at the same time every effort has been made to assimilate existing amenities and to respect national traffic needs.

The architectural design and grouping everywhere is excellent, albeit there is not one original feature in the whole of the Council's 100,000 houses; this is remarkable in view of what is being done abroad, although we must confess it seems inevitable in official architecture.

With regard to clearance and improvement schemes, whilst on the whole admirable work is being done, one cannot but question the ultimate wisdom of erecting five-story buildings and increasing, as far as one can judge, the number of human beings in areas already frightfully congested. In the absence of exact figures, it would appear that in some cases these improvement schemes are housing 1,000 people or more to the acre in slum areas.

As it is likely that nowhere there exists a housing scheme of such magnitude as the L.C.C. undertakings, their accumulated experience, collated in so compact a form, is of immense interest and value.

TWENTY-ONE YEARS OF TOWN PLANNING IN ENGLAND AND WALES. *By G. L. Pepler. Pam. sm.* 4*o. Lond.* [1930]. [*Town Planning Institute.*] 1*s.*

Reviewed by P. M. FRASER [*F.*]

It was a happy thought that prompted the Town Planning Institute to publish in pamphlet form Mr. Pepler's admirable résumé of the proclivities of town planners in this country during the last 21 years.

This interesting essay outlines the history of the movement which culminated, *inter alia*, in the Town Planning Act, 1909, the R.I.B.A. conference, 1910, and the Town Planning Institute, 1914.

The whole gamut of town and regional planning is brought into review, from the powers governing the layout of townships to the restriction laid upon landowners to keep their gardens tidy. Practically all important schemes from 1913 onwards are scheduled, with cogent comment thereon.

The subsequent amendments of the Act and the Model Clauses, with their revisions, are sketched. Reference is made to the work of the London Regional Committee, the Royal Committee for London Squares and other bodies of a like nature. The inception and progress of Regional Planning is touched upon, together with the Garden City Movement, Educational matters, etc.

Many cases are given of the practical economies resulting from Town Planning Control in actual practice.

The ideal before Town Planners cannot be too often stated, viz., " for every part of our country there shall be a plan ensuring that every inch shall be put to its most productive use." The word " productive " must, of course, be used in its widest and noblest sense. The most onerous part of the task still is to overcome the apathy of the public.

The discussion affords a valuable footnote in which, among other matters, a warning is sounded against standardisation.

The pamphlet is as informative and trenchant as it well could be, and we commend it to all who wish a vade-mecum of one of the most important of national movements.

THE WORKS IN ARCHITECTURE OF ROBERT AND JAMES ADAM. *Vols. 1 and 2. Sm. fo. Lond.* 1931. [*Reprint Tiranti.*] *7s. 6d. ea. vol.*

Volumes 1 and 2 of a reduced facsimile of " The Works " have just been published. This is the first complete reprint to be issued in England ; that published in France by Thézard appeared in 1900.

The reprint will consist of three volumes, price 7s. 6d. a volume (subscription price 18s. the three volumes), and it will be produced in a manner similar to Letarouilly's Édifices de Rome moderne, which was published by the same firm.

The volumes already published contain, among other designs, those for Sion House, Kenwood, Luton Park, Earl Derby's house, Grosvenor Square, Sir Watkin W. Wynne's house, St. James Square and designs for Public and Private buildings, including the Admiralty Screen, Whitehall, the Royal Society of Arts building in the Adelphi, the Theatre Royal, Drury Lane, and the parish church at Mistley. There are also illustrations of work designed for the King and Queen, including a charming design for a sedan chair and for a harpsichord for the Empress of Russia.

We note that an index has been added to the third volume which is in the press, this is lacking in the original work.

This reprint should prove of value to students and to others who cannot readily consult the original work.

If, in a few instances, the illustrations have suffered by reduction, this was unavoidable, as in the original work the plates are very large and the aim of the publishers was to produce portable volumes at a price within the reach of students.

W. P. S.

Architects' Conference—Dublin, 1931

With every confidence one may expect that such architects as may have visited Dublin and its environs already will gladly seize the opportunity, afforded by the forthcoming Conference, to revisit the City and the charming scenery in the midst of which it is enshrined. They will find that, as a seat of Government, in many directions Dublin has vastly changed. The jaunting car has practically disappeared in favour of the ubiquitous taxi, while motor omnibuses have to-day become a popular form of transport and ply not only within the municipal boundary, but to such distant centres as Cork, Sligo and Belfast. Paving, lighting, cleansing and other civic services have been modernised, and, during the past fifteen years, a considerable section of the City has been entirely refashioned and rebuilt. What may be termed perhaps the soul of Dublin, that peculiar fascination, which renders it so different from practically every other capital, still remains as of old. The dignity of the many vast squares, framed by early nineteenth-century dwellings, with their classic doorways and hammered ironwork, that make one feel involuntarily for pencil and sketch book, remain unimpaired by plutocrat or speculating builder. The public buildings, representative of some of the finest architecture of the late eighteenth century—the Custom House, Four Courts, General Post Office and a host of others, many of which suffered during the almost forgotten troubled times—have been partially reconstructed internally, but their façades remain as they left the hands of their creators. The city tours, during the afternoon of 18 June, leave scarcely any corner of the city unexplored and will, it is hoped, serve as a fitting introduction of our capital to those members of the Conference who may be unacquainted with her attractions.

The whole-day tours on 19 June, in some degree, may prove slightly less interesting, architecturally, than those arranged at some previous conferences. Millionaires are few in Ireland, and modern domestic building on a large scale is thus severely limited. Our villages differ materially from those that are within easy reach of the chief British cities and towns. None the less they undoubtedly do " fit " into the landscape and possess an appeal which grows with acquaintance into affection. The day-tours have thus been devised to enable members to enjoy the delightful scenery of the home counties, to wander through some notable gardens—Walpole's Gardens, Co. Wicklow ; Curragh Grange Japanese Gardens, Co. Kildare, and others—and to visit some of the fine mansions and interesting antiquarian remains with which the nearby counties are richly endowed.

Of Glendalough, a valley closed in on three sides by mountain ranges, with its ruined churches, round tower and crosses, a description is unnecessary. It is world famous for the grandeur of its scenery, and as being one of the most important groups of early Christian remains in Ireland. Powerscourt House, built in 1731 by R. Castle, which will be visited on the return journey, is a fine example of a mansion of the period and, from the front terraces, a magnificent panorama of Co. Wicklow is presented.

Santry Court, built in 1700, included in the second tour, is a large brick house with wings, the centre being Jacobean in style. The interior of this building is full of interest and contains the original staircase with a low balustrade. The Castle at Malahide and Howth Abbey and Castle with their gardens will be open for inspection,

and, particularly if the rhododendrums are on their best behaviour, will well repay a visit.

The Casino, Marino—tour No. 3—is by William Chambers, and may fairly be described as an architectural gem, although it has suffered from depredation and the efflux of time. St. Doulough's comprises an anchorite's cell, tower and chapel founded, it is believed, A.D. 600. Mellifont Abbey, which is embraced in this tour, was the first Cistercian House in Ireland and was founded by St. Malachy, a friend of St. Bernard of Clairvaulx. It possesses an unusually interesting history. The remains now consist of the gate house, tower, the lower part of the walls and transepts, the chapter house (thirteenth century), walls of the east range of claustral buildings and the lavabo, an octagonal building with fine detail, of which four sides are still existing. The tumuli of Dowth and Newgrange, dating from the bronze age, will also be visited.

The fourth tour includes Russborough, possibly the finest mansion of its period in the country, with an imposing frontage 700 feet long, and erected in 1741 from the joint designs of Richard Castle and David Buidon. The first occupier was Joseph Leeson, the son of a wealthy Dublin brewer, who later became Baron Russborough and finally Earl of Milltown. The interior is well preserved, providing fine examples of eighteenth-century decorative plaster and joinery work. A Bossi mantelpiece is also a treasured possession.

Carton, the seat of the Duke of Leinster, was remodelled in 1739 by Richard Castle, but later alterations have rather impaired its original character. It contains a fine saloon, of palatial proportions and rich in plaster work. Maynooth itself is an excellent example of a small country town, and it is regrettable that time will not permit a visit to the famous College situated therein. The architect of Castletown, also visited on this tour, is unknown. The building is reputed to be the largest house in Ireland and the earliest stone building in the Neo-classic style. It was built for Speaker Connolly in the third decade of the eighteenth century, and is noted for its pictures by old masters and its plaster decoration. The house is a museum not only of pictures but of china and furniture.

I have only touched briefly on some of the more prominent features of the arrangements, and am confident that each of the tours and visits will prove interesting, and, if as is hoped the weather is kind, thoroughly enjoyable.

The banquet will be held in the Great Hall of the Royal Hospital, Kilmainham, of which fine old building I hope to write a few notes in the next issue of the JOURNAL.

HARRY ALLBERRY [*A.*].

R.I.B.A. PREMISES COMPETITION.

The desire of the R.I.B.A. in instituting a competition for their own building was to secure the very best that its members could offer, and with this end in view it is hoped that all who can afford the time and thought enabling them to submit a design will do so, quite apart from whether they might be regarded as being among the senior or junior exponents of the art of architecture.

The inclusion in the conditions of the provision for a possible consultant may have conveyed the impression that this competition was regarded as more specifically intended for the younger members of our Institute, while, on the other hand, some of these may have imagined that it would be futile to place themselves in competition with architects of greater experience. It would be unfortunate if either of these views were to deter anyone to whom this competition is open, and who felt that he had a conception for the building worthy of consideration, from submitting a design.

BANISTER FLETCHER,
President.

Correspondence

PROFESSIONAL CHARGES.

21 *Harrington Street,*
Liverpool.
To the Editor, JOURNAL R.I.B.A. 7 *May,* 1931.

DEAR SIR,—The reference to this subject in the 2 May issue of the JOURNAL prompts me to point out it is very advisable these days not only to bring the R.I.B.A. Scale of Charges to the notice of clients "at the onset of the job" but to have it confirmed in writing.

In a very recent action which I was compelled to take in the Liverpool Court of Passage to uphold the R.I.B.A. Scale the Judge, in giving Judgment for me, said "the Scale of the R.I.B.A. although not in writing, was clearly understood and implied."

Defendants swore they had never heard of the R.I.B.A. Scale of Charges yet at my first interview with them "at the onset of the job" they enquired my terms which I expressly stated were the R.I.B.A. Scale and which, after consulting together on that very point, they at once accepted. And this on a "job" which was most satisfactorily finished, including all their own very substantial "extras" well within the Contract amount.

Architects must indeed protect themselves, it seems.—Yours faithfully,

J. JAMESON GREEN [*F.*].

Obituary

T. C. GOTCH, P.P.R.B.C., R.I., V.P.R.W.A.

We regret to announce the death of Thomas Gotch, P.P.R.B.C., R.I., V.P.R.W.A. Mr. Gotch, who died on 1 May, painted the Presidential portrait of his brother, Mr. J. A. Gotch, which now hangs in the Institute Common Room.

ARTHUR WAKERLEY [*F.*].

By the death of Mr. Arthur Wakerley, J.P., F.R.I.B.A., on Saturday, 4 April, Leicester loses one of its most public spirited citizens and an architect whose interest in the city and its housing development was considerable.

Born in 1862 Mr. Wakerley received his education in Melton Mowbray, his native town, and in 1878 was articled to Messrs. John Bird and Sons, who were largely concerned with the lay-out of Leicester in the last century. Early in his career he was a prizeman of the Leicester and Leicestershire Society of Architects. Until 1919 he practised in Leicester, being responsible for the opening up of the North Evington District, which under his guidance was changed from an area of disused clay pits to a thriving industrial town. The period of his chairmanship of the Local Highway and Sewerage Committee was one of great activity, his skill helping to direct the growth of Leicester, the boundaries of which were being extended. He was first chairman of the Housing Committee in 1921 and designed many new types of houses. He will, perhaps, chiefly be remembered for the part he played in the town planning and architectural development of Leicester after the War. The present scheme for development which is now being put in hand is in part one which he unsuccessfully advocated in 1924. From 1902 to 1924 he was President of the Leicester and Leicestershire Society of Architects. In 1897, at the age of 35, Mr. Wakerley was elected Mayor of Leicester. He was a keen Liberal and for 11 years took part in politics, without, however, being returned to Parliament, but in 1905 he was compelled, on account of ill-health, to retire from political life.

WILLIAM HAROLD JOHNSON [*L.*].

The death occurred on 12 February, 1931, of Mr. William Harold Johnson, L.R.I.B.A., of Wigan, civil engineer, architect and surveyor, of the firm of W. B. Johnson and Son.

He was born at Wigan in 1882, educated at the High School, and articled to his father, Mr. J. A. Johnson, with whom he was in partnership. After his father's death in 1915, Mr. W. H. Johnson carried on the practice, the work being of a general nature.

HAROLD PERCY BRENTNALL [*A.*].

The death occurred in New Zealand on 5 October 1930 of Harold Percy Brentnall, A.R.I.B.A., at the age of 57.

Mr. Brentnall had resided in New Zealand for the past seven years, having previously spent 25 years in South Africa. Among his South African appointments were that of clerk of works to the Union Buildings, Pretoria; architect to the Pretoria Municipality, and head architect on the staff of the Rand Water Board, Johannesburg, each of which posts he held for a number of years. Among the important works he designed for the latter body were power houses and a large filter. He left Johannesburg to go to East London to execute a large hotel; this, however, fell through and he decided to go to New Zealand.

He designed and carried out the Rabobee buildings in Durban and the golf club house and swimming baths for the Pretoria Municipality.

In Auckland he was head draughtsman for the firm of Messrs. Mahoney and Sons for two years, afterwards entering into partnership with Mr. Millikin, an engineer. Later he took an office on his own and held evening classes for pupils in architecture and quantity surveying. At the time of his death he was clerk of works for the New Plymouth High School new buildings.

HENRY STANLEY CLARK [*A.*].

The death occurred suddenly on 26 March of Mr. Henry Stanley Clark, A.R.I.B.A., at Fairway, Aldharbour Lane, Bushey, Herts.

Mr. Clark, who was 44 years of age, was born in London. He served his articles with G. A. Saxton, of Kilburn, and was in private practice for some time in St. John's Wood.

In 1912 he joined the architectural staff of the London County Council and enlisted in the Army in 1914, subsequently serving in Russia and returning to the Council in 1920, where he remained until his death.

Mr. Clark was particularly interested in domestic architecture, and built his own house at Bushey three years ago. He will be greatly missed by his colleagues with whom he was deservedly popular.

He was a Freemason and a member of the St. Lukes Lodge, Chelsea.

SIR BANISTER FLETCHER, P.R.I.B.A.

As stated in the last issue of the JOURNAL, Sir Banister Fletcher was elected an Honorary Corresponding Member of the American Institute of Architects at their annual Convention held in Texas this year. It would appear, however, that the records of the American Institute were not available at the Convention and Sir Banister's previous election to this honour as long ago as 1902 was therefore overlooked.

The fact of this small error in no way detracts from the sense of the honour conferred on their President felt by all members of the R.I.B.A.

£25,000 FOR THE LIVERPOOL SCHOOL.

Lord Leverhulme has recently given practical effect to an expressed wish of his father's in giving £20,000 from the Leverhulme estate to the Liverpool School of Architecture for new buildings; and Lord Leverhulme himself has added a further £5,000. In 1914 the late Lord Leverhulme promised the sum of £24,000 for the school buildings and £4,000 was then spent on purchasing a site, but owing to the War it was impossible to proceed with the scheme, which fell into abeyance until this generous completion of the gift.

Notes by the Science Standing Committee

ORIENTATION OF BUILDINGS.

Sun Planning by Means of Models. The Dufton-Beckett Heliodon.

The Science Standing Committee concur with the recommendation of their Sub-Committee on the Orientation of Buildings that members should be advised without delay of the possibilities of solving problems in connection with the penetration of sunlight into buildings by an instrument described in the following note. This instrument has recently been devised at the Building Research Station in connection with the work of the Sub-Committee. With its aid it has already been possible to obtain data in connection with insolation problems which should prove of considerable assistance in practical design.

It is anticipated that a report of the Sub-Committee will be available at an early date.

At an early stage in the investigation of insolation problems by the Committee on the Orientation of Buildings, the need became apparent for simple methods whereby the large volume of necessary data could be obtained without tedious labour. To meet this need a new instrument was devised at the Building Research Station by Mr. A. F. Dufton, M.A., and Mr. H. E. Beckett, B.Sc. It has recently been described in the *Architects Journal* under the title of "A Simple Heliodon," but no particulars were there given of its remarkable adaptability to practical problems in design.

The instrument of which the general arrangement is shown in Fig. I, enables insolation problems to be studied with the aid of simple models.

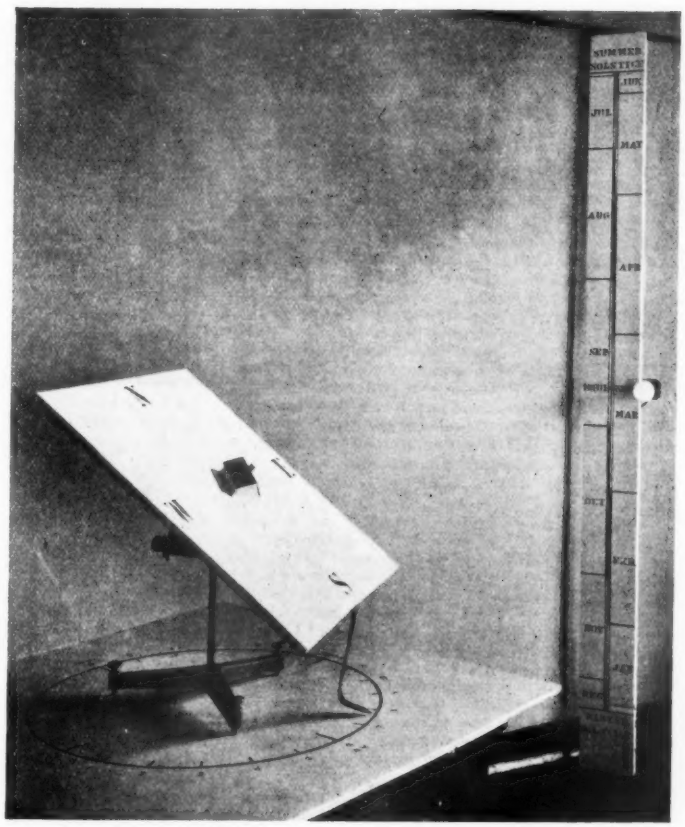


Fig. 1

The models are placed upon a flat board so tilted as to make the required angle of latitude with a vertical axis of rotation. Movement of the board about this axis corresponds to change in time of day, the time for any position being indicated by a pointer upon a horizontal scale. A lamp, representing the sun, can be adjusted vertically to the correct declination for any date or for the average of any season of the year. By rotating the board the period of insolation for any part of the model can be read directly from the horizontal scale.

The instrument has been applied to numerous problems, the solution of which would otherwise involve long and tedious calculation.

For example, it enables the durations of insolation of the walls of a proposed building at any season to be rapidly measured. The board with the attached model is rotated and the times at which the sun commences and ceases to shine upon the various walls are noted. Any obstructions can be simulated on the board by additional models, while a change of orientation merely entails a rotation of the model relative to the board. Many problems in Town Planning connected with the widths and directions of streets and with the heights of buildings can thus be solved with a minimum of labour.

In connection with the penetration of sunlight into buildings, the Committee have found it convenient to use plans of interiors contoured in hours of sunshine. The instrument has been applied with particular success to the preparation of such contoured plans,

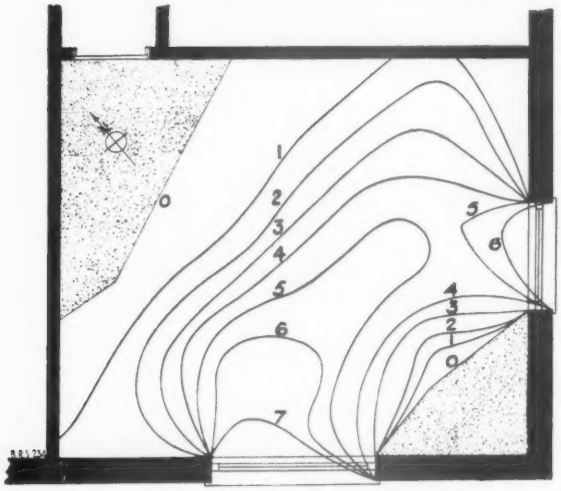


FIG. 2. Hours of sunshine receivable on 1st March at sill level within a room in London.

a simple example of which is shown in Fig. 2. This indicates the hours of possible sunshine on 1st March receivable at the latitude of London at table height at different parts of a room 14 ft. by 12 ft. with two windows of different widths facing respectively south-west and south-east. The Committee are considering the possibility of determining single values of the declination of the sun which shall represent with sufficient accuracy for practical purposes the average for spring, summer, autumn and winter.

The contours being plotted from direct instrument readings, the room can, if necessary, be contoured in hours of probable instead of possible sunshine by applying the necessary correction from recorded averages published by the Meteorological Office.

The usefulness of the instrument is, however, by no means confined to research work. It can be applied at once to practical everyday problems in design. For example, the value of contouring alternative plans for, say, a hospital ward, in average total possible or probable hours of sunshine for spring, summer, autumn or winter, will be obvious. The labour of collating, by means of ordinary Molesworth diagrams, the information necessary for this to be done would be quite prohibitive.

P. J. W.

Discussion on the Annual Report

The PRESIDENT: Before we begin the business meeting, I would like to tell you that we have here Mr. Donald Macgillivray, the President of the Rhodesian Society of Architects, and, anticipating your wishes, I have asked him to come and sit by us on the platform, though he is not a member at present of the Royal Institute.

I have to present the Report of the Council and Standing Committees for the official year 1930–31, and to move its adoption by this Annual General Meeting. I would like also to say that the Chairmen, or other representatives, of all the Committees whose reports are appended to the Council's Report, have been asked to attend this meeting, so as to be in a position to answer any questions that may be asked in connection with those Reports.

Mr. SYDNEY KITSON: I beg to second the motion.

The PRESIDENT: The meeting is now open for discussion.

Mr. GILBERT H. JENKINS: I understand, Sir, that this evening is devoted to a general review of the affairs of the Institute during the past year; and in rising to support the motion which has just been presented to the meeting, I would like to voice the gratitude of the general body of the members for the excellent work performed by its President, Council and Staff. We, apparently, look back on a very successful year, and we are looking forward to still more successful times in our new premises.

There are a few points in the Report to which I wish to draw the attention of the meeting, because I think this is the only occasion, on account of Bye-law 38, on which we get a chance of reviewing many matters which, in the ordinary way, would have come up before the four business meetings which were formerly held. I do not know whether the members appreciate what an enormous difference Bye-law 38 has made. If we take the work of the Practice Standing Committee, we find that they have again been engaged on the Conditions of Contract. The Conditions of Contract is a document which many young architects will accept without any question, as having been thoroughly thrashed out by the Council and put on such a basis that it can be offered to a client for signature without fear or favour. Under the new procedure, while the Council welcomes any criticisms which are made on any piece of work of that kind which it has undertaken, it gives no opportunity for its critics to see whether what the Council suggests as a result of those criticisms is likely to be, in its final form, satisfactory, before the Council proceeds to publication. This appears to me to be rather an undesirable state of affairs. It would be far better, if the Council saw its way, having received a mass of criticism from its members who are sufficiently interested to try and improve such a document, if those critics did have an opportunity of agreeing or disagreeing with the form arrived at as a result of those criticisms. I merely put that forward as a suggestion because I believe it would be for the eventual benefit of the Institute.

Presumably, we shall also not have the Scale of Charges before us again, that is, before the general body of members, but only the results, published as the authorised Scale of Charges. I think that in both these cases it would be rather a pity if they are published as the official documents

of the Institute without the general body of members having been given a further chance of criticism.

I would like to congratulate not only the Council, but also the members of the various Standing Committees and the other Committees on the enormous amount of good work they have accomplished for us this season. One has only to read the extraordinarily contracted form of the Report, which yet overfills an Institute JOURNAL, to realise the tremendous amount of work which must have been got through over the hundred-and-one points of interest which this Institute deals with. I notice, in the Educational Committee's Report, that a largely increased number of men have come up and have successfully passed the Associateship, and I think the Institute is to be congratulated that its numbers are on the increase. There is one little point in the Education Committee's Report which struck me as calling, perhaps, for some little explanation by its Chairman. That is the question of the desirability of extending the number of educational bodies who have the right to give exemption to their students from examination. I do not know whether the new Act of Parliament will entirely alter this procedure, but one notices that the Northern and the Regent Street Polytechnics, and the Municipal School of Arts and Crafts at Southend, now have the right to exempt their students from the Intermediate Examination. It seems to me that if that policy is extended, we shall have so many bodies exempting students that it will be a little difficult for the Institute to exercise that control over its exempting bodies which is desirable.

One notices in the Report, with regret, that our old friend and faithful servant Mr. Dircks has retired from the Library. I am sure that the wishes of the general body of members will coincide with those of the Council in expressing grateful thanks to Mr. Dircks for the sterling work which he has done for this Institute, and trust he will live long to enjoy the benefits of his pension. I am sure that we shall all welcome Mr. Carter as our new Librarian. He has come in at a very difficult time, for him, and yet at a time when we should have a young man, full of energy, who will see that our new Library and new building will be second to none in every way. We know that from the architectural literature point of view the Library is already second to none, and we trust that the new house will be worthy of it.

Looking at the Report, and seeing the innumerable points on which the Standing Committees and other Committees report to the Council, and in many cases the very vague language in which those reports are couched, one wonders whether some machinery could not be devised whereby the ordinary member, if he is sufficiently interested, could see these reports in the Library. Possibly they could be shown to him in a confidential way; as one understands that, under the procedure, it is impossible that these reports should be published. Still, there are many members of the Institute who are interested in a particular phase of its work, who, no doubt, would be very grateful if they could examine the more detailed reports which are sent in to the Council from time to time, and which are merely summarised in the Annual Report.

I have only one other point, Mr. President, and that is one on finance. I am sure we are all pleased to see that the Institute is so flourishing, and we know that every penny will be needed for our new premises. In going through the accounts, I notice that we pay 25 per cent. commission to our advertisement agents for the advertisements which appear in the JOURNAL and the KALENDAR, and that amounts to nearly £1,500. One wonders whether, for a publication such as ours, some different arrangement could not be made, whereby some saving might be effected in that. A salary of £500 a year and 10 per cent. commission, which would mean £1,000 a year, would result in a saving to the Institute of about £400 a year. I should have thought that over a thousand a year would have been sufficient to attract a very good man, who could run that equally well as paying a firm £1,500 a year on a percentage basis, and by such an arrangement we should save money.

I have very great pleasure in supporting this resolution which has been proposed and seconded.

Mr. SYLVESTER SULLIVAN: There were only two points which Mr. Jenkins raised concerning the Board of Architectural Education which require to be dealt with; they were the only two he mentioned. One concerned the number of schools recognised whose examinations absolved those who passed them from sitting for examinations at the Institute. Of course, the schools which are recognised, though they are increasing in number, are not increasing in number beyond the provision which has been made in our scheme, which deals with the geographical position of the schools whereby the whole country is designed to be covered. No school has been so recognised which is placed outside the ambit of that scheme.

With regard to this Institute having control over the schools which are recognised—I think that at Southend was mentioned—the Institute, through its Board, has entire control over the schools which have been recognised, not only through its external examiners, who visit the schools, but by its Visiting Board, which visits each school during a cycle of five years. But it has also, on the walls of the Institute itself, the work done in each school on annual exhibition, on which the Board through its officers, reports to the Board, and, from the Board, to the Council. So if the work in any particular school—which, as far as I am aware, has never yet happened—is not up to the standard, representations would be made about it.

That, I think, answers both Mr. Jenkins' points fully.

Lt.-Col. HOPKINS: In regard to finance, I think Mr. Jenkins referred only to the cost of our advertising. Well, Sir, before we appointed our present advertising managers, the Institute, I think, were making something like £1,000 to £1,200 a year on our advertisements. Since Mr. Rowley has been appointed we have shown, approximately, £3,000 a year profit. That £3,000 a year has not been obtained through Mr. Rowley going round amongst old advertisers. As an advertising agent I think he is like a builder's foreman; he has his own following, and he has brought to us this following of advertisers. That being so, we naturally acknowledge that we must pay him for the privilege. We pay him 25 per cent., yet, in spite of that, he shows us £3,000 a year profit. We paid off the compensation we had to give to our late advertising people in the first three years, and now we are in receipt of this greatly increased income from advertisements. I think that even Mr. Jenkins will admit that it is worth the 25 per cent.

Mr. SYDNEY KITSON [*F.*], Hon. Secretary: There is one point in the Report I would like to refer to, and that is concerning the annual dinner. I know that many of the younger members of the Institute feel that 30s. for themselves, and 35s. for their lady guest, is a very large sum to pay in the present day, and it is desirable that the Institute should, in the exercise of its functions, appeal to all its members. Therefore I should like to suggest the desirability of having a President's reception next year.

Mr. WOODCOCK: I do not know whether I am in order, or whether what the Honorary Secretary has just said is a proposition; if so, I shall be pleased to second it. I speak somewhat feelingly, for a year or two ago, at one of these annual meetings, I suggested that there should be a substantial reduction in the cost of the annual dinner, on behalf of those younger members whom the Honorary Secretary referred to. It was my hope that the cost should not be an inclusive one. I am not a teetotaller myself, but many members are abstainers, and they should not be expected to help pay for the drinks of those who are not. So now I would like to second the suggestion of our Honorary Secretary.

The PRESIDENT: I gather the idea is to provide a

function by the Institute free of expense, or without great expense. I do not think that need dispense with the possibility of holding a State function, to which you invite members of the Cabinet. I do not think one function need be an alternative to the other; it could be an addition to it. I do not know exactly what Mr. Kitson has in mind, but perhaps he will tell you.

Mr. KITSON: We have had such functions in the past, and I should like to see a President's Reception or Conversazione in these rooms. With regard to the annual dinner, I believe that if it were biennial it would be better.

Lt.-Col. HOPKINS: I think it would be a great pity if we were to give up what has almost become a tradition in the R.I.B.A., that is, our annual dinner. And I do not think that, up till now, you have had many vacant seats at any of those dinners. Every big society has its annual dinner, and I think that we, particularly at the present time, should keep up that tradition. It is going to keep us well to the fore, which is what we require. I think we should have a conversazione in addition; there is no reason why that should not be so. We have had it once before, and I think it was a very successful function. But I think we ought to keep up our annual dinner. I am speaking as an ordinary member of the Institute, not in another capacity. As such, I think all the members of the Institute would be very sorry if the annual dinner were dropped, as a function. We look forward to it, and we always, I think, enjoy it.

Mr. MILBURN: Colonel Hopkins has said exactly what I was going to say, and I am surprised—if my impression of what he said is right—that Mr. Kitson should suggest we have a conversazione instead of a dinner; because it is a most important function. We have had the Prince of Wales, the Duke of York, and other distinguished visitors. All the big societies, like ourselves, have these annual dinners, and I hope it will not be thought that we ought to discontinue it.

The proposition that it be suggested to the Council that a conversazione in addition to the annual dinner be held was put to the meeting, and carried unanimously.

The PRESIDENT: There was a question about the Scale of Charges.

Mr. SYDNEY TATCHELL: Speaking, for the moment, on behalf of the Practice Standing Committee—and I think I am expressing the opinion of members of the other Standing Committees—we are very grateful to Mr. Jenkins for his appreciative remarks. There is a great deal of work done behind the scenes, of which I think that even Mr. Jenkins is unaware.

He spoke of the new form of contract and the mass of criticism which had been submitted to the Council. In order that we may preserve our sense of proportion it will be well for you to know that out of 4,500 or 5,000 copies of the form of contract circulated to members in the United Kingdom, less than 100 criticisms were received, and that, I think, scarcely constitutes "a mass of criticism." But all the criticisms which were received were very carefully considered by the Drafting Committee, and due notice was taken of them; and as far as possible they were embodied in the final form, which I hope will soon be circulated to the members.

Mr. Jenkins also referred to the Scale of Professional Charges. There, again, the Council is made up of the elected representatives of members of this Institute, and this scale has been considered very carefully not only by the Special Committee, but also by the Council. I think I can assure Mr. Jenkins that when he sees the final form he will feel satisfied that every point has been dealt with.

He also referred to the reports of the Standing Committees. So far as the Practice Standing Committee is concerned we make a point, when there is a matter which we consider of general interest, to recommend to the Council that a report should be published in the JOURNAL, and I do not think we can do more than that.

Mr. PERCIVAL FRASER: I would like very much to support what Mr. Jenkins said about the conditions of contract, and I beg the President and Council on this occasion—our only occasion—to exempt this conditions of contract from Bye-law 38. It is a matter of far too great importance to be dealt with by a committee. Committees have dealt with these contracts before, I have myself put in many years of work on them. They have been fathered by the Council and put before the general meeting, and thrown out, and I think the uniformity and the unanimity with which these conditions of contract have been turned down by members has been the chief cause of Bye-law 38 going through. That, of course, is putting the cart before the horse, we ought to face the difficulty. The difficulty is that we do not like the conditions of contract. This is not the place to criticise them, but in important respects in the opinion of myself and others they are past praying for. We may, or we may not, take notice of them, according to whether we have time or inclination. With regard to the invitation to deal with the document sent out by the Contracts Committee, and send in criticisms, I had only two days in which to consider it. I could not do anything but simply read it through and despair as to what action could possibly be taken. I had no time to consult my friends or to discuss the matter or to give proper thought to it, to collate it or deal with it in an intelligent fashion. I, therefore, ask that the conditions of contract should be exempted from this Bye-law, which is practically a veto. Why the Institute agreed to the veto I do not know; it must have been when we were in a lethargic state, probably at Midsummer. Most members, when they are told they have no say in such matters, are honestly surprised. It is a procedure which was not wanted, this veto Bye-law, and it is not popular. The conditions of contract are too vital. We cannot afford to have our already onerous burdens added to. The architect's work is becoming a nightmare; he is supposed to be a superman, knowing art, science, engineering, law and chemistry, etc. We want support from our conditions of contract. These conditions of contract are retrogressive in many ways; they add to our responsibilities, and they do not help us. As they were put to us, they were half-baked. There were alternative clauses, and we do not know which the Council are going to favour. On arbitration you say the builders will not have this clause, and they want some other. How can we deal with such a position? It is impossible, so I ask the President and the Council for their consideration if we may have a real attempt, *en masse*, to criticise this document.

Mr. TATCHELL: I am sorry Mr. Fraser feels so badly about this form of contract. About 18 months' consideration and discussion has been given to it, and at every stage it was submitted to the Practice Committee, a collection of men elected by the general body, elected, presumably, for their knowledge of practice, and I do not think there is any point which has not been debated. It is a document which we never anticipated would please everybody. I do not think any form of contract, or any agreement, has been produced which satisfies all parties. It is a document which is drawn up for signature by reasonable people. We have not attempted to legislate for the unreasonable, the incompetent or the dishonest, but for two parties who desire to arrive at a fair deal, and I think this document will provide the necessary basis. We have had, of course, to meet other interested parties, such as the National Federation of Building Trades Employers, which represents the building industry throughout the Kingdom, and sub-contractors and merchants, who are as interested as are architects in the production of a good contract. It is useless for architects to attempt to produce a document which is not acceptable to the contractor; just as a document produced by contractors is valueless unless architects can accept it. I

would add that concurrently with the issue of this contract a Tribunal will be set up representing joint interests, and any clauses which are found to be difficult in practice will be considered by that Tribunal, and if necessary a revision will be recommended. I do not think Mr. Fraser need fear any nightmares will arise out of this form of contract.

Mr. FRASER: I would like to ask Mr. Tatchell one question: Are these conditions of contract a joint effort between architects and builders? I sincerely hope that is not the case. We are not here to make a bargain with contractors, but to protect the public; we are here to tell the contractors with what articles we want to be supplied and on what terms. I do not ask my bootmaker what colour shoes he would like to provide me with; I tell him I want a pair of brown boots, and of a certain weight and at about a certain price. This question of collaborating with the contractors is wrong in principle. Then to tell us that the conditions we have now are subject to a tribunal makes it worse, to say that means that every time an architect makes a stand there will be an arbitration on top of an arbitration.

Mr. TATCHELL: It must be manifest to every member here that if you are going to produce a document which is, in essence, an agreement, you must consider the other side. You cannot go to a contractor and say "I have produced this document and you must sign it." The contractor will object, just as the architect would object to any such form of contract produced by a contractor. It is a permissive document; and it is open to any architect in agreement with the contractor to make such corrections as, under special circumstances, may appear desirable. As to the alternative clauses, it is a matter of consultation and agreement with the contractor, and I do not agree with the principle that the building industry can be carried on in an atmosphere of antagonism. In these days it is essential in my judgment, that every party in the industry—and it is a great industry, almost the greatest in this country—should carry on in the spirit of goodwill and understanding. In the negotiations we have had with the contractors and the merchants we have found nothing but goodwill, and I think we ought to encourage that in every possible way.

Mr. JENKINS: I do not know whether I am in order in rising again to speak on the question of the contract, but I had hoped that you would have replied, Sir, to the question I raised, which was whether the critics of the former contract were to have an opportunity of seeing this form before it was published. I am in disagreement with the other critic who thinks we should not work in concert with the builders in producing a form of contract which must be signed by the builders. There is every advantage in trying to carry the builders with us, and agreeing to such a form that they will accept for many a year to come. My criticism against the contract was that in trying to make terms with the builders we appeared to have overlooked the other party to the agreement, and that is the employer. His interests seemed to have been neglected in the endeavours to arrive at some form which would be agreeable to all the other parties interested. I did not intend to-night to discuss the details of the form of contract, but merely to inquire whether we should be allowed a chance to have a last word on the form before it is published as the official document of this Institute.

The PRESIDENT: I see your point, and I think it will be done, more or less.

Mr. TATCHELL: No, Sir. The criticisims which have been sent to the Council have been considered by the Drafting Committee, and they have been considered by the Drafting Counsel, and the document as it left Counsel was submitted to our Council, and was approved by them unanimously. From the Council it was submitted formally to the National Federation of Building Trades Employers for their approval, and there is every reason to believe it will be accepted by them.

Mr. FRASER: Which arbitration clause?

Mr. TATCHELL: You will have the alternative arbitration clause. I do not think there will be any useful purpose gained by circulating this document again, we must reach finality some time, and the representatives of the general body have considered this, and have approved it in its final form. So far as the employer is concerned, it will be found that his interests are much better protected under it than they have ever been before.

Prof. BERESFORD PITE: May I ask, if a cogent criticism on a particular point addressed to the Council in answer to a request, will have disappeared into limbo? There have been many such. Humbly I may say I made one myself, and I am anxious to have an answer.

The PRESIDENT: It was one of the eighty?

Mr. ALAN MUNBY: How many criticisms have been made, roughly?

The PRESIDENT: I am sure Mr. Tatchell could tell you that, he is a mine of information.

Mr. TATCHELL: I think you over-rate me, Sir. All the cogent criticisms which were made were given most careful consideration, and if they were indeed cogent they were embodied in the final form. If, in the opinion of our Counsel, they were essential to the document they were embodied.

Prof. PITE: That is unsatisfactory. The questions require definite answers. I do not wish to put too great a burden on the Committee, but I think some reply might be addressed personally on some of these important matters, otherwise we are left in the dark.

The PRESIDENT: If you could tell him what it is he could perhaps answer it, now.

Prof. PITE: I should have to refer back to my letters, but the point I wrote on was the propriety of limiting the power of specifying provisional sums. I do not think that can be left in the air.

The PRESIDENT: It cannot have been left in the dark.

Prof. PITE: It is I who am in the dark.

The PRESIDENT: You will be in the sunlight when this document is produced.

Mr. JENKINS: We are not quite sure whether we shall be in the sunlight. The principal point I raised about the contract was the question of the responsibility for laying out the building on the site, which was taken off the builder's shoulders and thrown upon the architect, an impossible position, and I wanted to know, before the document was printed, that that position had been amended. One would like to know that such points had been put right before the document was finally printed.

Mr. TATCHELL: If I remember aright, Mr. Jenkins' criticism of the clause applied to the setting out of the building, and that was amended to coincide almost with his own words.

Mr. JENKINS: I am very pleased to hear it.

Mr. TATCHELL: With regard to Professor Pite's remarks. I am not very clear as to the point he desires to make, as to limiting the powers of making provisional terms. I can only say I do not think we have restricted the freedom of the architect to make such provision as he requires; it remains as it was.

Prof. PITE: The point is this; the provision of a provisional sum for steel work to be provided by a particular firm. I understand that under the new draft conditions the contractor is to have the right to put such a provision into a competition to have the alternative right to deal with it.

Mr. TATCHELL: I can answer that. That matter has been the subject of very considerable debate and consideration. Members of this Institute will be instructed that when they are inviting contractors to tender to ask them to state definitely if they desire to tender for any special work. The clause in the

contract provides that when a contractor directly carries out certain branches of work, he may, if he so desires and it is acceptable to the architect, have the opportunity of submitting a tender. Where a builder has a good stone yard, or a well-fitted joinery shop, there is no reason why he should not have the opportunity of tendering for those works. I am sure Professor Pite will find that the clause provides ample safeguards.

Prof. PITE: I must trust Mr. Tatchell's persuasiveness, but I am still in the dark.

Mr. ALAN MUNBY: Is it too much to suggest that the people who made the criticisms shall have a draft copy of the contract before it goes out?

Mr. C. WOODWARD: May I refer to the constitutional question which Mr. Fraser raised? As I understand, the present Bye-laws were approved by a referendum of this Institute, and the Council are now acting under those Bye-laws. It seems to me it is very late in the day for Mr. Fraser to put forward propositions such as he is now putting forward, because the Council have faithfully and properly followed the Bye-laws, as approved by the general body. It reminds me of most borough council elections. When the wrong candidate is returned, everybody says "Yes, of course, but I did not vote myself." Another thing, Mr. Fraser has a remedy, and apparently he has not read the Bye-laws, or he would know that remedy. I do not propose, at this hour, to remind him of that remedy. If he studies those Bye-laws, as he should have done in order to return a referendum, he will find what is the course to pursue.

Mr. A. H. BARNES: I ask whether the old forms of contract will still be on sale when the new ones are brought out.

The PRESIDENT: They will not be on sale, but, not being in Russia, we cannot compel you to use the new form.

Mr. BARNES: It is a great temptation to use the old form if it is already printed. I think it would be well if the old form could be obtained, architects would be no worse off than before.

Mr. TATCHELL: It is part of our bargain with the National Federation of Building Trades Employers that when this new form is issued, all other forms of contract will be withdrawn. We are living in the year 1931, the last form was issued in 1909, and much has happened since then. We have endeavoured in this new document to meet the needs of to-day. It is reasonable to withdraw the old form when the new one is issued.

The PRESIDENT: I do not want Mr. Fraser to go away with a feeling of antagonism to the new form; I think he will find that in it he has got everything he wants.

Mr. BEAUMONT: I do not think it is a loophole when Mr. Tatchell says if you do not like certain items in the contract you say to the builder "Cross it out." I can understand the builder saying, "This is the form sanctioned by your Institute"—then where are we?

Mr. TATCHELL: These suggestions are to be taken with some latitude. I do not suggest you should take your fountain pen and draw it through half the clauses of the contract, but it may be necessary to alter the wording to meet the particular case. When this contract is seen in its final form I do not think there will be much need to make an alteration, and the architect's task will be less onerous than it has been, because his insertions and corrections are collected on to one page, and he will not have to go through clause after clause, and put in "14 days," or "six months." It will be child's play to fill up the new form of contract.

The PRESIDENT put the original motion, and it was carried.

The PRESIDENT: The list of attendances at the Council and Standing Committee meetings has been laid on the table and will be printed in the next issue of the JOURNAL, and also sent out to members with the voting papers.

The PRESIDENT: I beg to move that a hearty vote of thanks be accorded to Mr. E. J. W. Hider [*F.*], and Mr. G. Ronald Topham [*A.*] for their services as Hon. Auditors for the past year.

Carried by acclamation.

Mr. HIDER: On behalf of my co-auditor, Mr. Topham, and myself, I want to thank you for the appreciation which you have shown for our little toil. I may say that owing to the very excellent way in which the accounts have been prepared by Mr. Saffery, your accountant, and the great courtesy we have received when we have come here to go through the accounts, means that a labour has been turned into a pleasure, so we ought to thank you for the opportunity.

The PRESIDENT: Mr. A. H. Goslett [*F.*] and Mr. G. Ronald Topham [*A.*] are both eligible and willing to be nominated as hon. auditors for the current year, and if it is your pleasure I beg to move that they be so nominated.

Agreed.

The PRESIDENT: I should like to tell you again that we have an architect of distinction among us this evening, Mr. MacGillivray, who has been three times President of the Rhodesian Society of Architects, and as he has come such a long way, you might like to hear a few words from him, telling us what he is doing.

Mr. DONALD MACGILLIVRAY: Mr. President and gentlemen, I assure you that it is not only a privilege, but a great pleasure to me to be here with you this evening. I have to thank your President for having invited me here, and I have to thank you on behalf of the Association which I represent, Sir, for the kind reception of myself as its President. I have particularly to thank him, and to thank you gentlemen for the splendid moral and financial support which you have given to my Society since its inception, and particularly in connection with the expense of having our Architects Bill passed through Parliament two years ago. Without the support of this parent body I am afraid that our efforts would have been futile, and I congratulate this Institute, as the parent body, for the magnificent work which it is doing to maintain the integrity and the status of the architectural profession throughout all the British Colonies.

I do not know that I need take up your time by speaking upon the subjects I have heard debated, but I can see that we in the Dominions and the Colonies may feel perfectly safe to leave these contracts and other important matters to the parent body. Thank you, sir.

Mr. F. G. HICKS (President of the Institute of Architects of Ireland): The last time I spoke in this hall was in 1886. It has been of great inteerst to me to hear this discussion on the form of contract and the Registration Bill, neither of which affect us very much in the Free State, because there we have a very fine form of contract, in which the builder can only have arbitration on extras.

But what I particularly wanted to mention to-night was the fact that we hope to see you all over in Dublin next month. We will guarantee you fine weather—I have looked up Old Moore's Almanac, which, as you know, is very reliable, so I can promise you the best of weather. Come, with your wives and families, and we will give you as good a time as we can. One thing, the one thing we shall avoid is architecture.

Allied Societies

(The attention of Members of the Allied Societies is particularly called to these pages)

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

On Saturday, 18 April, the eleventh annual meeting of the Berks, Bucks and Oxon Architectural Association was held in Oxford. The seventy members and guests who were present were welcomed at the Town Hall by Councillor H. S. Rogers, and were shown the Corporation plate, and afterwards visited the Pathological Laboratory and Rhodes House.

Mr. H. Hutt, the President of the Association, was in the chair at the annual meeting in the Hall of University College. Welcoming the Association to the College, Sir Michael Sadler said the skill and taste of architects were essential factors in the beauty of a country. A pre-eminent virtue of the great architect was self-abnegation and the avoidance of self-assertion in design when beauty depended upon respectful regard for adjacent buildings, and the contour and colour of the street or countryside. The architect had to practice opposite virtues. It was right that he should be mindful of tradition, but on the other hand, he must be brave in experiment. A good architect was not a copy-cat, nor did he kick over the traces.

To make a modern city beautiful, Sir Michael continued, is a difficult task, but it has definition. To keep beautiful the English countryside is another definite problem, " but we in England have now to face, in addition to these two tasks, a third, which is a blend of both," he added. " It often happens that a region which should be thought of as architecturally one is divided between the areas of two separate local authorities. One of these may be enterprising, the other parsimonious. One may not equal the other in public-spirited intelligence. It lies with us as individual citizens, and as citizens working together in societies, to use whatever power of persuasion we have in getting adjacent local authorities to keep in step and to share common ideals. In this work the help, advice and good will of permanent officials in London and in the local authorities are indispensable, but they themselves would be the first to acknowledge that in England bureaucracy itself dare not go bail for beauty."

The President, Mr. H. Hutt, said he appreciated particularly the reference made by Sir Michael Sadler to the need for yielding in some particulars to tradition. The tendency was to sneer at tradition and anything savouring of the past, but they should do their utmost to prevent desecration.

The report of the Council for 1930–31 presented by the Hon. Secretary, Mr. E. Steward Smith, showed a year of steady work, and a large increase in membership.

The report stated that under the town planning legislation, local authorities had been able to acquire some control over elevations of proposed buildings. It had been thought advisable that steps should be taken to form advisory panels to assist authorities in the three counties in preventing the erection of unsightly buildings. In most areas, volunteers had been obtained, and two or more Fellows of the Association had been allotted to each rural and urban district. The local authorities had now to be informed of the arrangements made.

The following officers were elected for the ensuing year: President, Mr. T. Lawrence Dale [*F.*]; Vice-Presidents, Mr. A. W. Saxon Snell [*F.*], Mr. H. J. Stribling [*A.*], Mr. R. F. Dodd [*F.*]; Hon. Secretary, Mr. W. Austin Daft [*A.*]; Hon. Treasurer, Mr. T. T. Cumming [*F.*]; Hon. Auditor, Mr. C. B. Willcocks [*F.*].

In vacating office, Mr. Hutt said that the past year had involved an enormous amount of work for the R.I.B.A. The re-graded publicity scheme had been sanctioned on more general lines, and without the employment of a professional agent. In Parliament the Registration Bill had secured its third reading. A disquieting amount of opposition to the Bill had been shown by the builders, and it would evidently be necessary to walk warily and see that nothing was done to depose the architect from his rightful position. The Association was becoming increasingly strong in numbers and influence. In the three counties included in the Association, the suggested advisory panels were complete.

Mr. T. Lawrence Dale, accepting the office of President, said that he appreciated the honour done to him by the Association. The retiring President had shown himself a master in imperial politics as well as in home affairs and he was confident that the growth in the numbers of the Association had been due in large degree to Mr. Hutt's work as President. He proposed a vote of thanks to Mr. Hutt which was unanimously adopted.

Votes of thanks were also passed to the other officers.

SOUTH-EASTERN SOCIETY OF ARCHITECTS.

The third annual general meeting took place on Monday, 27 April, at the Royal Institute of British Architects, when Mr. A. R. G. Fenning [*F.*] presided and presented the report of the Council.

Reference was made to the death of the late President, Col. Wilfrid John Hardcastle, and the Hon Treasurer reported that a memorial gift of ten guineas had been received from Mrs. Hardcastle, which was to be devoted to the provision of a President's Badge. The membership of the Society now numbers 764, of these 600 are Practising Architects. The Society had been closely following with interest the activity in connection with the Architects (Registration) Bill and the R.I.B.A. Development Policy. It was suggested that the next annual general meeting should be held in July 1932. In March a meeting of the Secretaries of the Allied Societies, suggested by the Society, took place in Birmingham in the form of a week-end Conference. The exchange of views of Societies from the North, South, East and West has proved most beneficial to the Societies and to the profession as a whole, and it is conceivable that the usefulness of the Allied Societies Conference to the profession in general may yet be further developed. Good understanding has been developed with the Builders and the smooth running of the new Building Contract negotiations has been greatly assisted in the area by joint luncheons organised at various centres by the architects and builders within the area. The Society has been fortunate in having Mr. W. E. Watson [*F.*] to read interesting papers on the legal problems which frequently arise in the building industry, and these papers have proved of considerable value to the architects and to the Federation of Master Builders in the area. The area covered by the Society is extended so that the five centres of Brighton, Canterbury, Croydon, Guildford and Tunbridge Wells have been arranged so that members may more readily keep in touch with their colleagues and obtain the benefits of intimate association and sympathetic co-operation in dealing with the many difficulties which enter into an architect's profession.

The Report of the Honorary Treasurer was very satisfactory, the most important fact being that the Society is now free from debt, this having been made possible by contributions to the Hardcastle Special Fund. It is confidently expected that

the initial expenses of the Society's inauguration having been met, the finances for future years will be satisfactory.

The following general officers were elected: President, Mr. Arthur R. C. Fenning [*F.*]; Vice-Presidents, Messrs. Thos. R. Clemence [*F.*], John L. Denman [*F.*], John W. Little [*F.*], Hugh Macintosh [*F.*], C. J. Fawcett Martindale [*A.*]; Hon. General Treasurer, Mr. William Henry Bidlake, M.A., [*F.*]; Hon. General Auditor, Major W. H. Robinson [*F.*] and Hon. General Secretary, Mr. R. Goulburn Lovell [*A.*].

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS.

On 12 March Mr. Ernest Berry Webber [*A.*] lectured to the Society on "Planning," Mr. J. Lancashire [*L.*] being in the chair.

The lecturer first dealt with aspect, prospect and contours as being three of the main factors which influenced the plan of a building. The by-laws of different localities and the prohibition, in this country, of the erection of a sanitary block without a window to the open air also influenced the design, but Mr Berry Webber said he thought this latter law would, before long, be altered and that this country would come into line with America. He also mentioned site value, cost of building, and the expected revenue to be derived from the finished building as essential considerations, and stressed the importance of making use of all the area available, giving instances of competitors who had spoilt their chance in competitions by wasting valuable site space. Other considerations were construction methods which influenced elevations and sections, the position of main services, and last but not least the time factor—delay over the scheduled time in the case of large business premises meaning very heavy loss of rent. He considered it important in many cases that the building should be designed so that it could be added to at a later date, to allow for future developments.

Mr. Webber next dealt with particular types of buildings mentioning that the day of the large house was past, to be taken by small houses and flats. He considered Devonshire House was a good example of the luxury flats for the rich class. Speaking of school design Mr. Webber said the accepted plan was for an open courtyard with buildings all round and an open verandah on the courtyard side. In the case of hospital design he did not see why this should be in the hands of a few specialists and said this specific knowledge could be easily acquired by a little study.

Mr. Webber illustrated his talk by slides of cinemas and theatres—luxury, latest lighting, good acoustics, proper projection of the picture and unobstructed view of the screen being very essential in the design of the modern cinema and theatre. Acoustics in church design was also mentioned as being most important, but in this case the design of the church itself was to a large extent governed by tradition. Commercial and industrial, and public and civic buildings were also dealt with, numerous slides of libraries, baths, assembly and town halls, museums, etc., being shown. He dealt particularly with the municipal buildings at Southampton and Manchester, pointing out the chief factors in the design which he thought probably won him the competition.

A vote of thanks to the lecturer was proposed by Mr. H. B. Leighton and seconded by Mr. A. G. Cotton.

Annual General Meeting.

The 43rd annual general meeting was held in the Medico Chirurgical Library, Sheffield University, on 9 April. The election of officers for the ensuing year resulted as follows: President, W. G. Buck [*F.*]; Vice-President, J. Lancashire [*L.*]; Hon. Treasurer, J. R. Wigfull [*F.*] and Hon. Secretary, H. B. S. Gibbs [*A.*]. A vote of thanks was passed to the retiring officers and Council.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

The annual general meeting of the Society took place at Leeds on 23 April, Mr. Norman Culley, the President, being in the chair.

The report stated that a definite increase of interest in the work of the Society had been shown, the attendance at meetings in every case having gone up. The innovation of holding general meetings outside Leeds had been very well received, there being large attendances on both occasions, and it was hoped to arrange meetings in other towns during the next session. The membership of the society had increased by 32 during the past year. A great deal of work had been successfully carried through by the various Standing Committees, so relieving the Council of a great deal of work of investigation and close examination on matters of detailed character. The use made of the library was not so great as might be desired, but it was hoped that when the library is installed at the Society's new headquarters greater interest would be taken in it. Two meetings of the local panel of the Council for the Preservation of Rural England were held, and it was hoped to add to the personnel of the West Yorkshire panel so as to increase its activities in the West Yorkshire area. The policy of the Council to interest the public in the arts generally and architecture specially had been carried out, and a series of six public lectures were given at Huddersfield. The lectures were intended for students of the Secondary schools of the town and for the public generally. The attendance at the lectures was satisfactory. Mr. Wm. Nicholson had again offered Travelling Scholarships to the value of £200, which were won by W. A. Guttridge, H. Waddington and A. Lambert, £60 each, and E. Boothroyd, £20. It was announced that Mr. Nicholson had most generously increased his offer for the next session to £240 in order to provide four scholarships to the value of £60 each.

The biennial dinner was held on 5 February, 94 members and guests attending. A scheme for a panel of Architects to advise on the Control of Elevations has received conditional approval. A Bureau of Building Materials had been formed at the Leeds College of Art and it was hoped architects would bring the Bureau to the notice of manufacturers. Mr. Longden's scheme for the preparation of Housing Plans for Speculative Builders had received the approval of the R.I.B.A. Council, but the Society's Council after much consideration were not able to recommend its adoption. It was hoped to call a meeting of those interested in this class of work to consider amendments to the scheme. The Hon. Secretary attended the Conference of Secretaries of the Allied Societies at Birmingham, and much valuable information was exchanged.

Mr. T. Butler Wilson, in moving that the report be adopted, paid high tribute to the value of the services rendered by the retiring Honorary Secretary, Mr. B. R. Gribbon. The motion was seconded by Mr. E. O. Robinson and supported by Mr. G. H. Foggitt.

ATTENDANCES AT COUNCIL AND STANDING COMMITTEE MEETINGS, SESSION 1930–1931.

The Council (11 Meetings.)

President: Sir Banister Fletcher 11; *Vice-Presidents:* Henry V. Ashley, 9; Henry M. Fletcher, 11; Francis Jones (Manchester), 10; Dr. Raymond Unwin, 11. *Honorary Secretary:* Sydney D. Kitson (Oxon.), 10.

Members of Council: Robert Atkinson, 4; Sir Herbert Baker, 0; Major Harry Barnes, 4; Herbert T. Buckland (Birmingham), 8; Sir Edwin Cooper, 3; H. S. Goodhart-Rendel, 6; W. Curtis Green, 9; E. Stanley Hall, 9; Arthur Keen, 9; H. V. Lanchester, 9; G. C. Lawrence (Bristol), 11; Thomas R. Milburn (Sunderland), 9; Oswald P. Milne, 3; Professor C. H. Reilly

(Liverpool), 8; Howard Robertson, 10; H. D. Searles-Wood, 8; Percy E. Thomas (Cardiff), 10; Maurice E. Webb, 5.

Associate Members of Council: Lieut.-Colonel H. P. Cart de Lafontaine, 7; Major T. C. Howitt (Nottingham), 9; R. Goulburn Lovell (Eastbourne), 11; Manning D. Robertson (Dublin), 2; J. Douglas Scott, 11; E. A. D. Tanner, 10; Michael J. Tapper, 10; Michael Waterhouse, 5; E. Berry Webber, 10.

Licentiate Members of Council: A. B. Hayward, 7; Lieut.-Colonel P. A. Hopkins, 11; Major F. W. Rees, 11; J. Llewellin Smith (Aberdare), 5; Percy J. Waldram, 5; Colonel N. H. Waller (Gloucester), 11.

Past Presidents: J. Alfred Gotch, 2; Walter Tapper, 0.

Representatives of Allied Societies in the United Kingdom or the Irish Free State: (Northern Province of England) Lieut.-Colonel A. K. Tasker (Newcastle), 6; J. T. Halliday (Manchester), 9; Professor Patrick Abercrombie (Liverpool), 6; G. Dudley Harbron (Hull), 11; G. H. Foggitt (Leeds), 9; W. G. Buck (Sheffield), 10. (Midland Province of England) A. T. Butler (Birmingham), 4; Albert Herbert (Leicester), 4; Major B. C. Deacon (Luton), 3; G. M. Eaton (Nottingham), 7; E. H. Buckingham (Norwich), 8. (Southern Province of England) B. Priestley Shires (Plymouth), 4; Sir Harold Brakspear (Corsham), 4; Harry Hutt (Reading), 11; J. Arthur Smith (Basingstoke), 9; F. Wykeham Chancellor† (Chelmsford), 2; A. R. G. Fenning† (Eastbourne), 4. (Allied Societies in Scotland) Andrew Balfour (Glasgow), 6; John Begg (Edinburgh), 7; W. L. Duncan (Aberdeen), 10; D. A. Stewart (Dundee), 5. (South Wales Institute of Architects) T. Alwyn Lloyd (Cardiff), 10. (Allied Societies in Ireland) F. G. Hicks (Dublin), 3; R. H. Gibson (Belfast), 0.

Representatives of Allied Societies in the British Dominions Overseas: Philip J. Turner (Canada), 1; Professor A. S. Hook (Australia), 0; W. Hawke (South Africa), 0; D. W. Ditchburn (India), 0.

Representative of the Architectural Association (London): G. G. Wornum, 8.

Representative of the Association of Architects, Surevyors and Technical Assistants: W. H. Hamlyn, 4.

Chairman of the Board of Architectural Education: L. Sylvester Sullivan, 11.

Chairmen of the Four Standing Committees: E. C. Bewlay* (Birmingham) (Art), 9; M. S. Briggs* (Literature), 10; Sydney Tatchell* (Practice), 10; Major C. F. Skipper† (Science), 9.

Chairman of the Allied Societies' Conference: G. C. Lawrence (Bristol), 11.

The Art Standing Committee (8 meetings): E. C. Bewlay (Birmingham), *Chairman*, 6; H. Chalton Bradshaw, 5; L. H. Bucknell, 2; C. F. W. Dening (Bristol), 5; R. A. Duncan, *Joint Hon. Secretary*, 7; E. Maxwell Fry, 4; H. S. Goodhart-Rendel, 5; Charles H. Holden, 2; C. H. James*, 4; Arthur Keen, *Vice-Chairman*, 4; A. B. Knapp-Fisher*, 4; Edward Maufe, 1; Oswald P. Milne*, 1; F. Winton Newman, 2; Hon. H. A. Pakington, *Joint Hon. Secretary*, 6; S. Rowland Pierce*, 4; M. H. Baillie Scott, 5; S. G. Short, 6; Louis de Soissons, 2; A. S. Soutar, 3; Michael J. Tapper, 7; Francis R. Taylor, 7; F. E. Towndrow*, 5; E. Berry Webber, 3.

The Literature Standing Committee (8 meetings): Robert Atkinson*, 0; M. S. Briggs, *Chairman*, 8; A. S. G. Butler, 6; Lieut.-Colonel H. P. Cart de Lafontaine, 3; Frederick Chatterton, 6; H. W. Chester, 5; Captain W. T. Creswell*, 6; J. Murray Easton, 3; A. Trystan Edwards, 0; D. Theodore Fyfe (Cambridge), 5; Professor F. S. Granger (Nottingham), 1; G. D. Gordon Hake* (Bristol), 3; A. B. Hayward, 6; Arthur E. Henderson, 8; Miss E. K. D. Hughes*, 6; H. C. Hughes (Cambridge), *Joint Hon. Secretary*, 6; E. R. Jarrett, 6; F. H. Mansford, 8; Basil Oliver, *Vice-Chairman*, 8; L. G. Pearson, 2; A. J. Penty, 2; C. S. Spooner, 3; Grahame B. Tubbs, *Joint Hon. Secretary*, 5; C. F. A. Voysey*, 6.

The Practice Standing Committee (10 meetings): Henry V. Ashley, 4; John Batty, 8; F. R. Betenson, 7; A. Burnett Brown*, 5; J. W. Denington, 5; H. S. Fairhurst (Manchester), 8; W. H. Gunton*, 6; W. H. Hamlyn*, 3; E. Bertram Kirby (Liverpool), 8; G. C. Lawrence (Bristol), 8; R. Norman Mackellar (Newcastle-on-Tyne), 9; C. J. F. Martindale (Deal), 8; Captain A. Seymour Reeves, 6; J. Douglas Scott, 8; H. D. Searles-Wood, 4; J. Alan Slater, 9; John Swarbrick* (Manchester), 9; Sydney Tatchell, *Chairman*, 10; Percy E. Thomas (Cardiff), *Vice-Chairman*, 5; Edward Unwin, 7; Francis T. Verity, 5; Michael Waterhouse*, 6; W. E. Watson, *Joint Hon. Secretary*, 9; Charles Woodward, *Joint Hon. Secretary*, 9.

The Science Standing Committee (9 meetings): Robert J. Angel, 6; Hope Bagenal, 3; A. H. Barnes, *Joint Hon. Secretary*, 9; W. T. Benslyn* (Birmingham), 2; J. A. Bessant, 6; Eric L. Bird, 5; W. E. Vernon Crompton*, 6; G. R. Farrow, 6; Edwin Gunn, 2; W. A. Harvey (Birmingham), 4; A. F. Hooper, 5; Arthur J. Hope (Bolton), 4; Harry Hutt* (Reading), 7; G. N. Kent*, 7; Alan E. Munby, *Vice-Chairman*, 7; E. J. Partridge [Deceased], 5; Thomas E. Scott, 7; Major C. F. Skipper (Cambridge), *Chairman*, 9; Dr. R. E. Stradling*, 7; S. Pointon Taylor, *Joint Hon. Secretary*, 9; Dr. Raymond Unwin, 1; Percy J. Waldram, 8; C. S. White, 5.

THE ANNUAL ELECTIONS.

New Nominations to Council and Standing Committees.

The following nominations have been made by members in accordance with Bye-Laws 35 and 56:—

As Members of Council.—Briggs: Martin Shaw [*F.*], nominated by E. C. Bewlay, J. Murray Easton, E. Stanley Hall, F. Barry Peacock, Howard Robertson, L. Sylvester Sullivan, Dr. Raymond Unwin, *Fellows*; Curtis: William Thomas [*F.*], nominated by John Swarbrick, *Fellow*; Chas. McLachlan, J. Douglas Scott, Edgar A. D. Tanner, Charles Woodward, *Associates*; L. A. F. Ireland, W. E. Woolley, *Licentiates*; Downing: Henry Philip Burke [*F.*], nominated by W. D. Caröe, J. Harold Gibbons, T. Frank Green, A. Blomfield Jackson, Frank C. Ryde, *Fellows*; Herbert Passmore, John Rawlinson, *Associates*; Farrow: George Reginald [*F.*], nominated

* Marked thus was appointed after the first meeting of the Council. Possible attendances, 10.

† Marked thus was appointed after the second meeting of the Council. Possible attendances, 9.

by H. W. Horsley, Arthur Keen, H. Lidbetter, H. D. Searles-Wood, Gerald Warren, W. Henry White, *Fellows ;* R. C. White-Cooper, *Associate ;* KENYON : Arthur William [*F.*], nominated by Robert Atkinson, C. H. James, Stanley G. Livock, Winton Newman, David Barclay Niven, Howard Robertson, *Fellows ;* Edgar A. D. Tanner, *Associate ;* LLOYD : Thomas Alwyn [*F.*], nominated by G. Dudley Harbron, J. Herbert Jones, Charles S. Thomas, *Fellows ;* Ernest E. Morgan, O. S. Portsmouth, W. S. Purchon, *Associates ;* G. R. Hubert Rogers, *Licentiate ;* LONGDEN : Reginald Threlwall [*F.*], nominated by Professor Patrick Abercrombie, J. H. Beckett, E. T. Watkin, *Fellows ;* Harold Goldstraw, F. Morrall Maddox, *Associates ;* J. Brittain Adams, W. J. Venables, *Licentiates.* NICHOLAS : Charles [*F.*], nominated by R. Atkinson, Kenneth M. B. Cross, E. Guy Dawber, J. E. Dixon-Spain, H. Austen Hall, Henry Tanner, Thos. S. Tait, *Fellows.* OWEN : Reginald Wynn [*F.*], nominated by Sydney Tatchell, *Fellow ;* J. T. Castle, Chas. McLachlan, F. J. Maynard, Edgar A. D. Tanner, *Associates ;* L. A. F. Ireland, W. E. Woolley, *Licentiates.* SKIPPER : Major Charles Frederick [*F.*], nominated by Alfred H. Barnes, Lieut.-Col. P. Hopkins, Harry Hutt, Alan E. Munby, Thos. E. Scott, Sydney Tatchell, S. Pointon Taylor, *Fellows ;* P. W. Barnett, *Associate ;* Percy J. Waldram, *Licentiate.* SOISSONS : Louis Emanuel Jean Guy de Savoie Carignan de [*F.*], nominated by C. Cowles-Voysey, J. Murray Easton, Arthur W. Kenyon, Stanley G. Livock, Howard Robertson, W. E. Watson, *Fellows ;* H. J. Venning, *Associate.*

As Associate Members of Council.—EMERSON : Harry Valentine Milnes [*A.*], nominated by T. P. Bennett, J. Ernest Franck, Bernard W. H. Scott, C. B. Smith, *Fellows ;* E. Godfrey Page, L. S. Slaughter, Morris L. Winslade, *Associates.* RIX : Reginald Arthur [*A.*], nominated by Guy Maxwell Ayrton, Harry Hutt, Herbert Spink, *Fellows ;* W. David Hartley, E. Steward Smith, Herbert J. Stribling, Geoffrey H. Williams, *Associates.*

As Licentiate Members of Council.—REEVES : Captain Augustus Seymour [*L.*], nominated by John Swarbrick, Sydney Tatchell, *Fellows ;* Chas. McLachlan, F. J. Maynard, J. Douglas Scott, Charles Woodward, *Associates ;* L. A. F. Ireland, W. E. Woolley, *Licentiates.* TAYLOR : Francis Robert [*L.*], nominated by H. Yolland Boreham, Arthur Keen, F. E. Mennie, John E. Yerbury, *Fellows ;* Charles S. Carter, Edwin Gunn, E. R. B. Harriss, *Associates ;* Thos. Jno. Fox, Percy J. Waldram, *Licentiates.*

As Licentiate Member of the Literature Standing Committee.—BEGLEY : William Walter [*L.*], nominated by Walter H. Godfrey, H. S. Goodhart-Rendel, A. E. Henderson, F. E. Mennie, Sir Charles A. Nicholson, C. B. Smith, *Fellows ;* A. R. Powys, *Associate ;* Arthur D. Sharp, Francis R. Taylor, *Licentiates.*

As Member of the Practice Standing Committee.—CAPLE : Major William Henry Dashwood [*F.*], nominated by William T. Benslyn, Ernest C. Bewlay, Henry E. Farmer, W. Alexander Harvey, *Fellows ;* William H. Ashford, Arthur McKewan, A. Malcolm McKewan, *Associates.*

As Associate Member of the Practice Standing Committee.—EMERSON : Harry Valentine Milnes [*A.*], nominated by T. P. Bennett, J. Ernest Franck, Bernard W. H. Scott, C. B. Smith, *Fellows ;* E. Godfrey Page, L. S. Slaughter, Morris L. Winslade, *Associates.* VENNING : Harry John, F.S.I. [*A.*], nominated by Graham R. Dawbarn, J. E. Dixon-Spain, Arthur Wm. Kenyon, Stanley G. Livock, Charles Nicholas, Lionel G. Pearson, *Fellows ;* Edgar A. D. Tanner, *Associate.*

As Member of the Science Standing Committee.—SEARLES-WOOD : Herbert Duncan [*F.*], nominated by E. Stanley Hall, Lieut.-Col. P. Hopkins, Arthur Keen, Sydney D. Kitson, L. Sylvester Sullivan, Sydney Tatchell, *Fellows ;* J. Douglas Scott, *Associate.*

As Licentiate Members of the Science Standing Committee.—WALLER : Colonel Noel Huxley, M.C., T.D. [*L.*], nominated by C. A. Clayton Greene, S. W. Milburn, Thomas R. Milburn, W. Milburn, *Fellows ;* Geo. Talbot Brown, F. H. Newrick, *Associates ;* Geo. Newton, *Licentiate.* TAYLOR : Francis Robert [*L.*], nominated by A. H. Barnes, H. Yolland Boreham, Arthur Keen, F. E. Mennie, John E. Yerbury, *Fellows ;* Charles S. Carter, Edwin Gunn, E. R. B. Harriss, *Associates ;* Thos. Jno. Fox, Percy J. Waldram, *Licentiates.*

ELECTION OF MEMBERS.

In accordance with the terms of Bye-laws 10 and 11, the following candidates for membership were elected at the Council Meeting held on Monday, 11 May 1931 :—

AS HONORARY ASSOCIATE (1)

HOLLAND-MARTIN : ROBERT MARTIN, C.B., F.S.A.

AS HONORARY CORRESPONDING MEMBER (1)

POPE : JOHN RUSSELL, P.L.B., M.A., Litt.D., F.A.I.A., N.A. (New York City).

AS FELLOWS (12)

ACKROYD : SAMUEL WILLIAM [*A.* 1920].
CANNELL : JAMES [*A.* 1927].
DOD : HAROLD ALFRED [*A.* 1914] (Liverpool).
HOBBISS : HOLLAND WILLIAM [*A.* 1904] (Birmingham).
LEWIS : GEORGE STANLEY [*A.* 1922] (Liverpool).
PROCTER : JOHN CLIFFORD, M.C. [*A.* 1907] (Leeds).

And the following Licentiates who have passed the Qualifying Examination :—

BENNETT : JOHN (Exeter).
BEVERLEY : SAMUEL.
SEWARD : HENRY THOMAS (Manchester).
STEWART : WILLIAM FRASER TYTLER (Glasgow).
UNDERDOWN : ALWYN (Seaford).

And the following Licentiate who is qualified under Section IV, Clause 4 (*c*) ii of the Supplemental Charter of 1925 :—

MACKENZIE : ALEXANDER FINLAY (Inverness).

AS ASSOCIATES (9)

BOND : GERALD HOLLINGSWORTH [Final] (Hongkong).
CUTHBERTSON : DALE [Special Examination] (Singapore).
FISK : GEORGE MANSON [Passed five years' course at the School of Architecture, McGill University, Montreal. Exempted from Final Examination] (Montreal).
HADDON : DAVID STRACHAN [Final] (Johannesburg).
LINFIELD : GUY REGINALD [Passed five years' course at the Architectural Association, London. Exempted from Final Examination].
MCLEAN : COLIN ROSS [Final].
MCRAE : DOUGLAS GEORGE WALLIS [Final] (Toronto 5, Canada).

NARWEKAR: SHRIDHAR JAYARAM [Final] (Bombay).
NICOLLS: GUSTAVUS FLITCROFT [Passed five years' course at the Architectural Association, London. Exempted from Final Examination] (Tunbridge Wells).

AS LICENTIATES (49)

ANDERSON: ALEXANDER FREDERICK BERENBRUCK.
BECKETT: HERBERT ARTHUR (Colchester).
BEER: ERNEST VICTOR (Exeter).
BERRY: ERNEST TYLER.
BISCOMB: WILLIAM EDWARD (York).
BLOUNT: EDWARD HARRY ANTHONY (Belfast).
BROWN: CHARLES ROBERT (Colchester).
BURTON: DUDLEY JAMES MCPHERSON (Colchester).
CHAPMAN: ALEXANDER LAWRENCE (Johannesburg).
CLARK: WALTER HENRY (Cyprus; and Reading, Berks).
COLLINS: CLARENCE REGINALD THOMAS (Oxford).
COWPER: SYDNEY AUSTEN, M.C. (Salisbury, S. Rhodesia).
CRIPPS: LIONEL JACK REDGRAVE (Worthing).
DIXON: BERTRAM EWART.
ETCHELLS: FREDERICK.
FARMER: ERIC (Walsall).
FOLKES: HUGH ERNEST (Stourbridge).
FORSTER: DOUGLAS ALFRED (Cambridge).
FREEMAN: JOHN TREVOR STACY (Yeovil, Somerset).
FROUD: DENIS COGSWELL MAYNARD (Bristol).
GOMM: WILLIAM JAMES.
GRAY: EDWARD JAMES.
GREGORY: PATRICK BERNARD (Belfast).
HAYWARD: WILLIAM HANSELL.
HICKS: JOHN SAMUEL DAWES (St. Leonards-on-Sea).
HOLT: ARTHUR WELLESLEY (Stockton-on-Tees).
HOWARD: SYDNEY.
HUNTER: PERCY BARNWELL (Hove, Sussex).
IONIDES: BASIL.
LESLIE: JAMES SMITH (Skegness, Lincs).
LOMAX: PERCY HIRST (Colchester).
MCGREGOR: ALEXANDER STEWART (Greenock, Renfrewshire).
MCLAUGHLIN: CHARLES VINCENT (Londonderry).
MCLEAN: MAJOR GEORGE GARDNER (Glasgow).
MELDRUM: ROY (Aberdeen).
PLATT: EDWARD POULTER.
RICHARDSON: EDWARD (Newcastle-on-Tyne).
ROBERTS: GILBERT CLARENCE (Frinton-on-Sea).
ROBSON: FREDERICK CHARLES.
SHACKLETON: WILLIAM (Bradford).
STAYNER: WILLIAM CLIFFORD.
TAYLOR: JAMES (Glasgow).
TURNER: HAROLD GEORGE.
WADDINGTON: FRANK (Preston).
WALLIS: CHARLES HENRY, P.A.S.I. (Worthing).
WEBSTER: HARRY (Sheffield).
WILLETT: CECIL HAROLD ALVA (Reading).
WRIGHT: JOSHUA STANLEY (Leeds).
YATES: LEONARD (Stockport).

APPLICATIONS FOR MEMBERSHIP.

ELECTION 15 JUNE 1931.

In accordance with the terms of Bye-laws 10 and 11, an election of candidates for membership will take place at the Council Meeting to be held on Monday, 15 June 1931. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A., not later than Tuesday, 26 May 1931 :—

AS HON. CORRESPONDING MEMBERS (2).

BIERBAUER: DR. ING. VIRGIL, Váczi Utca, 71, Budapest IV, Hungary. Proposed by the Council.
KERTESZ: CHARLES ROBERT, Architect, Assistant Secretary of State, Szegenyhaz Utca, 19, Budapest 11, Hungary. Proposed by the Council.

AS FELLOWS (17)

BENNETT: ROBERT [*A.* 1903], 1 Leys Avenue, Letchworth; Hall Barn, The Glade, Letchworth. Proposed by J. A. Gotch, Dr. Raymond Unwin, and Courtenay M.Crickmer.
FORTESCUE: GEORGE ALAN [*A.* 1919], 32 Beauchamp Place, Knightsbridge, S.W.3. Proposed by Arthur Keen, Edward Maufe, and Leslie T. Moore.

And the following Licentiates who have passed the Qualifying Examination :—

ASHWORTH: BERTRAM, 14 Castle Street, Liverpool; "Crossways," Bebington, Cheshire. Proposed by B. M. Ward, Duncan A. Campbell, and Leonard Barnish.
COOK: HARRY, 7 Gilmour Street, Paisley; Cragroy, Thornly Park Avenue, Paisley. Proposed by John Watson, Geo. A. Boswell, and A. G. Henderson.
CULPIN: EWART GLADSTONE, Alderman, L.C.C., Officer de l'Ordre de la Couronne de la Belgique, 3 Portsmouth Street, W.C.2; 19 Harcourt House, Larkhall Estate, S.W.8. Proposed by W. R. Davidge, Ernest G. Allen, and Alfred C. Bossom.
HAMILTON: ANDREW, 7 Gilmour Street, Paisley; 15 Traquair Drive, Cardonald, Glasgow. Proposed by John Watson, Geo. A. Boswell, and A. G. Henderson.
KELSALL: JOHN SCOTT, 39 Chapel Road, Worthing; White House, Woodmancote, Henfield, Sussex. Proposed by Sir Charles A. Nicholson, Major Hubert C. Corlette, and T. J. Rushton.
KIRBY: FRANK MOORE, Anchor Brewery, Horselydown, S.E.1; 4 Essex Road, Gravesend. Proposed by Sir Banister Fletcher, Charles Pickford, and Alfred Burr.
LEED: JAMES CONSTABLE, 10 Beaumont Street, Oxford. Proposed by Thomas Rayson, T. Lawrence Dale, and N. W. Harrison.
LEWIN: GEORGE HENRY, County Hall, Northampton; New Duston, Northampton. Proposed by R. J. Williams, Colonel John Brown, and Lt.-Col. J. W. Fisher.
ROBINSON: HERBERT MILLAR, Castlegate Chambers, Castlegate, Nottingham; 37 Rectory Road, West Bridgford, Notts. Proposed by F. W. C. Gregory, George M. Eaton, and Major T. Cecil Howitt.
SCOTT: THOMAS HENRY BIRCHALL, 11 and 12 Finsbury Square, E.C.2; "Glaslyn," London Road, Brentwood, Essex. Proposed by S. Phillips Dales, Thomas R. Milburn, and W. Milburn.
WARD: KENNETH, 9 Museum Street, York; Tweed Villa, Haxby, York. Proposed by F. T. Penty, G. Dudley Harbron, and Frederick J. Horth.
WHITE: JAMES RICHARDSON, County Hall, Northallerton, Yorks; Rostholme, 10 Arncliffe Terrace, Northallerton, Yorks. Proposed by Geo. Bland, T. Edward Marshall, and R. Ridley Kitching.

And the following Licentiates who are qualified under Section IV, Clause 4 (*c*) ii, of the Supplemental Charter of 1925 :—

KLINGENDER: FREDERICK LOUIS, 31 Queen Street, Melbourne, Victoria, Australia. Proposed by Leighton F. Irwin, Roy K. Stevenson, and W. R. Butler.
LANCASHIRE: JOHN, Montgomery Chambers, Hartshead, Sheffield; "West Lawn," Fulwood Park, Sheffield. Proposed by Charles M. E. Hadfield, Edwd. M. Gibbs, and W. G. Buck.
MANSFORD: FREDERICK HERBERT, 15 Kingsend, Ruislip. Proposed by H. Rogers Houchin, H. C. Lander, and S. B. Caulfield.

AS ASSOCIATES (11)

EDMUNDS: MISS ROSETTE MARY, B.A., B.Arch. [Final]. Elwin Street, Strathfield, Sydney, N.S.W. Proposed by Professor Leslie Wilkinson, Alfred S. Hook, and B. J. Waterhouse.

FIRTH: THOMAS FREDERICK [Passed 5 years' course at Leeds College of Art. Exempted from Final Examination]. 15, St. Michael's Square, Chapeltown Road, Leeds. Proposed by Victor Bain, B. R. Gribbon, and H. S. Chorley.

HAWSON: HUGH (JUN.) [Passed 5 years' course at Edinburgh College of Art. Exempted from Final Examination], "Lonmay," 23 Hillhouse Road, Blackhall, Midlothian. Proposed by John Begg, Charles D. Carus-Wilson, and F. C. Mears.

MATTHEW: ROBERT HOGG [Passed 5 years' course at Edinburgh College of Art; Exempted from Final Examination] 43 Minto Street, Edinburgh. Proposed by John Begg, Sydney H. Miller, and Charles D. Carus-Wilson.

MHATRE: GAJNAV B. [Final], 9 Belsize Avenue, N.W.3. Proposed by Alex. G. Bond, H. V. Lanchester, and Professor A. E. Richardson.

PEDEN: MISS BARBARA CONSTANCE WYBURN [Passed 5 years' course at the University of Sydney. Exempted from Final Examination], Illawambra, Chatswood, Sydney. Proposed by Professor Leslie Wilkinson, Alfred S. Hook, and B. J. Waterhouse.

PENN: WILLIAM HENRY MILNER [Passed 5 years' course at the Architectural Association. Exempted from Final Examination], The Whyn, Bosham, Sussex. Proposed by Howard Robertson, Verner O. Rees, and Louis de Soissons.

RUSSELL: JAMES BELL [Final], 1158 Beaver Hall Square, Montreal, Quebec, Canada. Proposed by W. S. Maxwell, Philip J. Turner, and Ramsey Traquair.

THOMPSON: ERIC LINDSAY, B.Arch. [Passed 5 years' course at the University of Sydney. Exempted from Final Examination], Russell Avenue, Lindfield, N.S.W. Proposed by Professor Leslie Wilkinson, B. J. Waterhouse, and Henry E. Budden.

TURNER: MISS HELEN ALMA NEWTON, B.Arch.(Hons.) [Passed 5 years' course at the University of Sydney. Exempted from Final Examination], "Woyonulla," Glen Road, Roseville, N.S.W. Proposed by Professor Leslie Wilkinson, B. J. Waterhouse, and Henry E. Budden.

WHITE: NORMAN JOSEPH SCHOFIELD [Final], 97 Heath Street, Hampstead, N.W.3. Proposed by Howard Robertson, V. O. Rees, and Louis de Soissons.

AS LICENTIATES (23)

ASHWORTH: JAMES ROTHWELL, Palace Buildings, Peel Street, Accrington; Brooklyn, Queen's Road, Accrington. Proposed by Wm. J. Newton and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

BRIDGES: GEORGE PERCIVAL, c/o Simon Carves, Ltd., 20 Mount Street, Manchester; Craigleigh, Crescent Road, Hale, Cheshire. Proposed by J. Theo. Halliday, John Swarbrick, and H. R. Gardner.

BRIERLEY: STANLEY, City Architect's Department, Town Hall, Manchester; Holly Grove, Dobcross, near Oldham. Proposed by F. Quentery Farmer, and applying for nomination by the Council under the provisions of Bye-law 3 (d).

COLMAN: ERNEST EDWARD, 17 Railway Road, King's Lynn. Proposed by John Laurie Carnell, Ernest H. Buckingham, and Eric W. B. Scott.

DODDS: ARCHIBALD KIRKWOOD, M.C., 38 Victoria Street, Westminster, S.W.1; "Essira," Shere, Surrey. Proposed by G. Val Myer, T. F. Maclennan, and E. J. Tanner.

ELDRED: HERBERT SYDNEY GUILDFORD, c/o the Borough Surveyor, Town Hall, Rochdale; 15 Falkland Avenue, Spotland, Rochdale. Proposed by Isaac Taylor and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

FLAWS: LESLIE RAYNER, M.M., Weaver Chambers, The Bull Ring, Northwich, Cheshire; 1 East Avenue, Rudheath Park, Northwich. Proposed by Ernest Ogden, J. Theo. Halliday, and John Swarbrick.

GOULD: VICTOR ROYLE, The Howard de Walden Office, 23 Queen Anne Street, W.1; Brown Gable, The Bourne, Southgate, N.14. Proposed by Claude W. Ferrier, J. J. Joass, and Frank M. Elgood.

GRAY: EDWIN SHERIDAN, Messrs. Gray and Evans, 51, North John Street, Liverpool; 6 Beresford Drive, Hesketh Park, Southport. Proposed by John Clarke, T. Taliesin Rees, and the Hon. Secretary of the Liverpool Architectural Society.

HAMILTON: PERCY ARTHUR RICHARD FARMER, 69 Kennington Oval, S.E.11; 27 Rotherwick Road, Golders Green, N.W.11. Proposed by Thos. Wallis, R. Elsey Smith, and Lawrence A. D. Shiner.

HOBBS: HERBERT PRENZEL, 10 Marsden Street, Manchester; Jesmond Dene, Alderley Edge, Cheshire. Proposed by Ernest Gunson, W. S. Beaumont, and Harry S. Fairhurst.

LITTLEJOHN: LOUIS SALMOND, c/o Arthur Brocklehurst and Co., 10 Norfolk Street, Manchester; 7 Welten Avenue, Didsbury. Proposed by Arthur Brocklehurst, J. Theo. Halliday, and John Swarbrick.

PILLING: RANDOLPH SMITH, J.P., Post Office Yard, Colne Lane, Colne; 263 Keighley Road, Colne, Lancs. Proposed by Sam Taylor, and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

POLLARD: THOMAS ARTHUR, 12, Mill Street, Padiham, Lancs; "Green Haugh," Simonstone, near Burnley. Proposed by Sam Taylor, and the President and Hon. Secretary of the Manchester Society of Architects under the provisions of Bye-law 3 (a).

PRITLOVE: SAMUEL BERTRAM, 6 Sherwood Street, W.1; 14, Berwyn Road, Richmond, Surrey. Proposed by Edwin J. Sadgrove, M. N. Castello, and Frank T. Verity.

PROCTER: BASIL, Crichton Hall, Dumfries. Proposed by F. C. Eden, And. N. Prentice, and applying for nomination by the Council under the provisions of Bye-law 3 (d).

QUINN: CECIL DARLEY, c/o Ribble Motor Services, Preston, Lancs; 5 Ellerslie Road, Ashton, Preston. Applying for nomination by the Council under the provisions of Bye-law 3 (d).

STOTT: GEORGE EDWARD, York Chambers, Yorkshire Street, Oldham; "Taxal," Chamber Road, Oldham. Proposed by Ernest Simister, and the President and Hon. Secretary of the Oldham Society of Architects under the provisions of Bye-law 3 (a).

THAKUR: KHANDERAO PANDURANG, 59 1st Carpenter Street, Khetwady Main Road, Bombay. Proposed by John H. Horniman, and the President and Hon. Secretary of the Indian Institute of Architects under the provisions of Bye-law 3 (a).

TURNER: PERCY ROBINSON, 11 Clegg Street, Oldham; 143 Windsor Road, Oldham. Proposed by J. Herbert Heywood, Thomas Taylor, and Ernest Simister.

WALSHE: ARTHUR CHARLES, District Office of Works, Waterford; 6 St. Andrew's Terrace, Newtown, Waterford.

Applying for nomination by the Council under the provisions of Bye-law 3 (d).

WILDING : FRED MOXON, R. B. Mather, Sons and Wilding, 34 Birley Street, Blackpool ; 38 Lincoln Road, Blackpool. Proposed by Fredc. T. Waddington, Francis L. Lumb, and Major Halstead Best.

WINNING : ALEXANDER BARR, c/o Hobbs, Smith and Forbes, W. A. Trustee Buildings, St. George's Terrace, Perth ; Melville Terrace, South Perth, Western Australia. Proposed by Sir J. Talbot Hobbs, and the President and Hon. Secretary of the Royal Institute of the Architects of Western Australia under the provisions of Bye-law 3 (a).

R.I.B.A. PROBATIONERS.

During the month of April 1931, the following were registered as Probationers of the Royal Institute :—

BALDWIN : EDWARD THOMAS, 47 Gaphill Avenue, Whoberley, Coventry.

BARSLEY : RONALD, 258 Harold Road, Clive Vale, Hastings.

BEARPARK : JOHN RONALD, 27 Duesbery Street, Prince's Avenue, Hull, E. Yorks.

BENJAMIN : ROSE ELISABETH, 30 Hocroft Road, N.W.2.

BLACKMAN : MERVYN HENRY GERALD, 117 Stonefield Terrace, Hastings, Sussex.

BRAUN : HUGH STANLEY, 64 Gayton Road, Harrow.

BRIGGS : BASIL IAN, 33 Montpellier Villas, Cheltenham, Glos.

BROWN : RAYMOND GORDON, 453 Moore Road, Durban, Natal.

CHAPMAN : HENRY FREDERICK, 102 Northcroft Road, W. Ealing, London, W.13.

DAVY : GEOFFREY, Oak Garth, Ben Rhydding, Ilkley.

DEANS : RALPH WILLIS, 84 Brecknock Road, Islington, N.7.

FRANCIS : ALFRED EDWIN, " Ellerslie," Abbotsford Road, Blundellsands, Liverpool.

FUDGE : ALAN GEORGE, 18A Oak Road, Woolston, Southampton.

GALLOWAY : ERIC MELVIN, Oldmanse, Brechin, Angus.

GILLINGHAM : GEORGE RICHARD, 54 College Road, Isleworth, Middlesex.

GOUGH : GORDON HARRY, 5, Spencer Road, Belper, Derbyshire.

GRUNDY : JAMES ALFRED, 2 Richmond Terrace, Ulverston.

HAMMOND : LEONARD HOLMES, 193 Wembley Hill Road, Wembley, Middlesex.

HATT : ALBERT HENRY, 33 Parkwood Road, Osterley, Middlesex.

HOPKINS : RONALD AUSTIN, The Garage, Niddry Lodge, Holland Street, W.8.

HOWLETT : LESLIE ROBERT, 453 Norwich Road, Ipswich.

INNES : JOHN, 11 Eltringham Gardens, Edinburgh.

JARVIS : NORMAN KARL, 19 Lidiard Road, Earlsfield, S.W.18.

KENNEDY : THOMAS BRIAN, 34 Chapel Road, Northenden, near Manchester.

KING : BASIL CLIFTON, 20 Grove Gardens, Hendon, N.W.

LEES : WILLIAM THOMAS STANLEY, 81 Queens Road, Bootle, Liverpool.

LE ROSSIGNOL : JOHN AUGUSTIN, 7 St. John's Road, Harrow, Middlesex.

MACINTOSH : LAURENCE ALAN, 94 Sandy Lane, Wallington, Surrey.

MILNES : CHARLES BRIAN KENDALL, Wayside, 45 Sutton Road, Bournemouth, N.

MOORE : HAYDN SIDNEY, Hope Cottage, Whaley Bridge, near Stockport.

MORGAN : EDGAR LESLIE, 5 Brisbane Road, Reading, Berks.

MURPHY : ALEXANDER, 235 Albertbridge Road, Belfast, Ireland.

NEISH : ROBERT, 9, Ardross Terrace, Inverness.

NEWTON : ALEXANDER JOHN, Lourdes, Castle Terrace, Hadleigh, Essex.

NEWTON : ALBERT THOMAS, 66 Tiverton Street, Wavertree, Liverpool.

OWEN : EVAN HUGH, Clifton House, 15 Claude Road, Roath, Cardiff.

PAYNE : PHILIP STUART, " Foison," Mapperley Plains, Nottingham.

PEACOCK : RAYMOND GEORGE, 62 Porth-y-Castell, Barry.

SALKELD : GEORGE ARTHUR, 7 Alexander Road, Bromwich Road, St. John's, Worcester.

SMITH : WILLIAM KNIGHTS, 10 Bruce Road, Mitcham, Surrey.

SPARE : KENNETH ARTHUR, " Farleigh," 63 Sandy Lane South, Wallington, Surrey.

STONE : STANLEY JOHN, Daveystone Cottage, West Hill, Ottery St. Mary, Devon.

SYMES : LEONARD CHARLES, 4 North View Road, Hornsey, N.8.

TAYLOR : WILLIAM ERIC, 9 West End Park, Londonderry, N. Ireland.

THOMSON : RONALD HAMILTON, Gartcows, Jerniston Street, Motherwell.

TREGONING : VIVIAN ANGWIN, 66 Dolcoath Road, Camborne, Cornwall.

TURNER : ERIC GURNEY HAMMOND , 4 The Avenue, Colchester.

WALKER : DENIS VIVIAN CAMPBELL, 5 Queen Street, Great Yarmouth.

WALLACE : DEREK REEVE LINDSAY, " Ellerslie," Bush Hill, London, N.21.

WEBB : BEATRICE LOVAT, 8 Effingham House, Larkhall Estate, S.W.8.

WHITTON : ALEXANDER RICHARD, " Hillside," Oldknow Road, Marple, Cheshire.

WIGINGTON : REGINALD, 87 Plantation Road, Oxford.

WRIGHT : JOHN PHIN MILLER, 56 Elmbank Terrace, Aberdeen.

Notices

THE FOURTEENTH GENERAL MEETING.

The Fourteenth General Meeting of the Session 1930-31 will be held on Monday, 1 June 1931, at 8 p.m., for the following purposes :—

To read the Minutes of the Annual General Meeting held on 11 May 1931 ; formally to admit members attending for the first time since their election.

To read the following paper, " Museum Planning," by Mr. Eric Maclagan, C.B.E., Hon. A.R.I.B.A.

SPECIAL GENERAL MEETING.

A Special General Meeting will be held at the conclusion of the above Ordinary General Meeting for the following purpose :—

To consider the Council's proposal to amend the Licentiateship Declaration to bring it into line with that to be signed by an Associate, and if approved to pass the following resolution :—

That the Declaration to be signed by a Licentiate be amended as follows :—

After the word " am," third line, delete the words "not engaged in any other avocation than that of an Architect or Architect and Surveyor," and insert the

words " engaged in the study (or practice) of Architecture, and have attained the age of thirty years " ; further

That the necessary steps be taken to obtain the sanction of the Privy Council to such amendment as is required to give effect to this resolution.

THE ARCHITECTS' CONFERENCE, DUBLIN, 17–20 JUNE 1931.

Final arrangements for all the events of the Conference are now being made. It is hoped that all members who have not already done so will at once refer to the programme sent to them with the last issue of the JOURNAL and send in their names without delay for such of the events as they desire to take part in.

Members of the R.I.B.A. and the Allied Societies who are officials of local authorities are asked to notify the Secretary R.I.B.A. if they would like formal invitations to be sent to such authorities to appoint delegates to the Conference.

SPECIAL TRAVELLING FACILITIES.

The railway companies in Great Britain have agreed to issue first-class tickets to Irish Ports available from 15 to 22 June inclusive at the ordinary first-class fare and one-third for the double journey.

The Irish railway companies have also agreed to issue special reduced fare tickets in all classes. Members and their friends who desire to take advantage of these special fare concessions must present at the booking office a signed voucher to be previously obtained from the Secretary R.I.B.A.

HOSPITALITY.

In addition to the clubs mentioned in the Conference Programme, the National Yacht Club has also extended hospitality to members of the Conference during their stay in Dublin. Members of the Dublin Bay Sailing Club have offered to take members of the Conference as members of their crews for an afternoon's sailing in Kingstown Harbour or Dublin Bay on Saturday, 20 June.

THE ANNUAL DINNER.

The Annual Dinner will take place on Thursday, 21 May 1931, at 6.45 for 7.15 p.m., in the Hall of Lincoln's Inn (by the kind permission of the Benchers of Lincoln's Inn).

As the accommodation is limited and the places are being rapidly filled up, members who wish to attend and have not yet applied for tickets are requested to do so immediately.

MEMBERSHIP OF THE R.I.B.A.

THE LICENTIATE CLASS.

The revised Bye-laws of the Royal Institute of British Architects have received the approval of His Majesty's Privy Council and applications may now be sent in for membership of the R.I.B.A. in the Licentiate Class. Full information and the necessary forms will be sent on application being made to the Secretary R.I.B.A., 9 Conduit Street, London, W.1.

LICENTIATES AND THE FELLOWSHIP.

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (*b*) and (*cii*), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

OVERSEAS APPOINTMENTS.

Members contemplating applying for appointments overseas are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

THE NATIONAL ASSOCIATION OF WATER USERS.

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

NEW BUILDING MATERIALS AND PREPARATIONS.

The Science Standing Committee wish to draw attention to the fact that information in the records of the Building Research Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the director for any information he can impart regarding their properties and application.

EXHIBITION OF THE ARCHITECTURE OF MODERN TRANSPORT.

The exhibition in the R.I.B.A. Galleries will remain open until 22 May inclusive, between the hours of 10 a.m. and 8 p.m. (Saturdays 5 p.m.).

It is hoped that members will do their utmost to ensure that all their friends visit the exhibition while it is open and thus justify the time, trouble and expense which have been incurred in arranging it. No charge is made for admission.

Competitions

R.I.B.A. NEW PREMISES.

The R.I.B.A. invite architects, being Members or Students of the R.I.B.A., or of the Allied and associated Societies, to submit in competition, designs for new premises and headquarters to be erected on a site in Portland Place and Weymouth Street, London, W.1.

Jury of Assessors :

Mr. Robert Atkinson [*F.*].
Mr. Charles Holden [*F.*].

Mr. H. V. Lanchester [*F.*].
Sir Giles Gilbert Scott, R.A. [*F.*].
Dr. Percy S. Worthington, F.S.A. [*F.*].

Premiums: £500 and a further £750 to be awarded according to merit.

Last day for receiving designs: 31 March 1932.

Conditions of the competition have been circulated to Members, or may be obtained on application to the Secretary, R.I.B.A., 9 Conduit Street, London, W.1.

BIRKENHEAD: NEW CENTRAL LIBRARY.

The Birkenhead Corporation propose to invite architects to submit, in open competition, designs for a new Central Library to be erected in Market Place South. Mr. A. N. Prentice [*F.*] will be the Assessor. (Conditions are not yet available.)

BIRMINGHAM: CENTRAL MUNICIPAL BANK AND HEAD OFFICES.

The closing date for this competition, which was originally 18 April, has been extended to 30 May.

COVENTRY: NEW BRANCH BATHS.

The City Corporation of Coventry invite architects to submit, in open competition, designs for new Branch Baths, to be erected at Foleshill, Coventry.

Assessor: Mr. F. J. Horth [*F.*].

Premiums: 200 guineas, 100 guineas and 50 guineas.

Last day for receiving designs: 30 June 1931.

Conditions of the competition may be obtained on application to Mr. Frederick Smith, Town Clerk, Council House, Coventry. Deposit £1 1s.

DUDLEY: NEW COUNCIL SCHOOL.

The Dudley Education Authority invite architects within a radius of 15 miles of Dudley to submit, in competition, designs for a new Council School to be erected at Blowers Green, Dudley.

Assessor: Mr. Herbert T. Buckland [*F.*].

Last day for receiving designs: 1 June 1931.

Conditions of the competition may be obtained on application to Mr. J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

LEICESTER: NEW OFFICES FOR CORPORATION DEPARTMENTS.

The City Corporation of Leicester invite architects in the British Isles to submit, in open competition, designs for new offices for Corporation Departments, to be erected in Charles Street.

Assessor: Mr. E. Berry Webber [*A.*].

Premiums: £300, £200 and £100.

Last day for receiving designs: 26 June 1931.

Conditions of the competition may be obtained on application to Mr. A. T. Gooseman, M.Inst.C.E., City Engineer and Surveyor, Town Hall, Leicester. Deposit £2 2s.

NORTHAMPTON: PUBLIC BATHS, POLICE AND FIRE STATIONS, ETC.

The Corporation of Northampton invite architects to submit, in open competition, designs for new Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square.

Assessor: Mr. Percy Thomas, O.B.E. [*F.*].

Premiums: £500, £400, £300 and £200.

Conditions of the competition may be obtained on application (before 29 May) to Mr. W. R. Kew, Town Clerk, Guildhall, Northampton. Deposit £2 2s. (Conditions have not yet been received.)

SOUTH SHIELDS: INGHAM INFIRMARY.

The Committee of Management of the Ingham Infirmary, South Shields, invite architects in the area of the Northern Architectural Association to submit, in competition, designs for proposed extensions.

Assessor: Lt.-Col. George Reavell, O.B.E. [*F.*].

Premiums: £250, £100, and £50.

Last day for receiving designs: 16 June 1931.

Conditions of the competition may be obtained on application to Mr. John Potter, Secretary, Ingham Infirmary, South Shields. Deposit, £2 2s.

SOUTHAMPTON: NEW SCHOOL.

The Governors of King Edward VI School, Southampton, invite architects to submit, in open competition, designs for a new School to be erected on a site at the corner of Hill Lane and Wilton Road, Southampton.

Assessor: Mr. Sydney Tatchell [*F.*].

Premiums: £150, £100 and £50.

Last day for receiving designs: 6 June 1931.

Conditions of the Competition may be obtained on application to Mr. G. A. Waller, Clerk to the Govenors, 7 Albion Place, Southampton. Deposit £1 1s.

Members' Column

MR. ARNOLD SILCOCK, F.R.I.B.A.

Mr. Arnold Silcock, F.R.I.B.A., is proceeding on business for a short visit to the United States and during his absence all matters connected with his practice will be dealt with by Mr. Frank W. Knight, F.R.I.B.A., 3 Verulam Buildings, Gray's Inn, W.C.1. Telephone No.: Chancery 7036.

CHANGE OF ADDRESS.

Mr. R. D. Jones, A.R.I.B.A., has changed his address, and all communications should be addressed to him c/o O. D. Jones, Minydon, Borthygest, Portmadoc, until further notice.

Mr. John MacGeagh [*A.*] of Goodson's Chambers, 2, Donegall Place, Belfast, has changed his address to 23, Ocean Buildings, Donegall Square East, Belfast.

H. R. COLLINS AND A. E. O. GEENS.

Mr. A. E. O. Geens [*A.*], for the past 9 years Chief Assistant in the offices of Mr. H. R. Collins [*F.*], has been admitted to Partnership, and the firm will continue to practise at Regent Chambers, 15, Westover Road, Bournemouth, under the style of H. R. Collins and A. E. O. Geens.

ACCOMMODATION REQUIRED.

Member of Institute requires an office near Charing Cross. Moderate inclusive rent. Good address.—Box 3041, c/o Secretary R.I.B.A., 9 Conduit Street, W..1

APPOINTMENTS WANTED.

Member with ten years' experience in first-class London offices desires permanent position with interest and prospects of partnership in established practice in London or the provinces. Capital available.—Box 2941, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Member [*A.*], 38, Prizeman design University College, with twenty-two years' experience London and Provinces, desires engagement. Entire charge taken of office and jobs. Keen and rapid worker. Public buildings, churches, domestic work, hospitals, factories, shops, hotels, etc.—Box No. 4531, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

WANTED.

Second-hand plan chest and office desk (large or partner size), "Osda" type, oak or mahogany. Padded leather revolving office or library chair, draughtsman's table, and leather or hide covered easy chair, office pattern.—Box No. 1531, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XV

SESSION 1930–1931.

At the Ninety-Seventh Annual General Meeting, being the Thirteenth General Meeting of the Session, 1930–1931, held on Monday, 11 May 1931, at 8 p.m.

Sir Banister Fletcher, F.S.A., President, in the chair.

The attendance book was signed by 28 Fellows (including 14 members of Council), 10 Associates (including 3 members of Council), and 6 Licentiates (including 1 member of Council).

The Minutes of the Ordinary General Meeting held on 27 April having been published in THE JOURNAL, were taken as read, confirmed and signed as correct.

The Hon. Secretary announced the decease of:—

Edward John Partridge, F.S.I., transferred to the Fellowship Class in 1925. Mr. Partridge was a prominent member of the late Society of Architects and was President of that body in 1922–23. At the time of his decease Mr. Partridge was a member of the R.I.B.A. Registration Committee and also the Science Standing Committee.

Henry Cecil Montague Hirst, elected Associate 1886, Fellow 1928, and transferred to the Retired Fellowship in that year.

Edwin William Gruffydd Richards, transferred to the Licentiate Class in 1925.

and it was Resolved that the regrets of the Institute for their loss be entered on the Minutes and that a message of sympathy and condolence be conveyed to their relatives.

The following member attending for the first time since his election was formally admitted by the President:—

Mr. F. Barber [*L.*].

The President formally presented the Report of the Council and Standing Committee for the official year 1930–1931, and stated that the Chairmen or other representatives of all the Committees whose reports were appended to the Council's report had been asked to attend the meeting so as to be in a position to answer any questions that might be asked in connection with their reports.

The President having moved the adoption of the Report and invited discussion upon it, the Hon. Secretary seconded the motion and a discussion ensued.

The motion having been put from the Chair, it was Resolved that the report of the Council and Standing Committees for the official year 1930–1931 be approved and adopted.

On the motion of the Hon. Secretary, seconded by Mr. E. H. Woodcock [*A.*], it was Resolved to suggest to the Council that arrangements should be made for a conversazione to be held next Session in addition to the Annual Dinner.

The President introduced to the meeting and cordially welcomed Mr. Donald MacGillivray, President of the Institute of Southern Rhodesian Architects. Mr. MacGillivray briefly responded.

The President stated that the list of attendances at the Council and Standing Committee meetings had been laid on the table, and would be printed in the next issue of THE JOURNAL, and also sent out to members with the Voting Papers.

Upon the motion of the President a vote of thanks was passed by acclamation to Mr. E. J. W. Hider [*F.*] and Mr. Ronald Topham [*A.*] for their services as Hon. Auditors for the past year.

Mr. A. H. Goslett [*F.*] and Mr. Ronald Topham [*A.*] were nominated for election as Hon. Auditors during the ensuing year of office.

The proceedings closed at 9.10 p.m.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expression of the Institute.

R.I.B.A. JOURNAL.

DATES OF PUBLICATION.—1931:—6, 20 June; 11 July; 8 August; 19 September; 17 October.